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Number 3



COOPER ORNITHOLOGICAL CLUB

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MEETINGS OF THE COOPER ORNITHOLOGICAL CLUB

SOUTHERN DIVISION: At the Museum of History, Science, and Art, Exposition Park, Los Angeles. Time of meeting, 8 P. M., the last Thursday of every month. Take south-bound car from town; on Spring Street the car marked "University", on Hill Street the car marked "Vermont and Georgia". Get off at Vermont Avenue and Thirty-ninth Street. Walk two blocks east to Exposition Park. The Museum is the building with the large dome.

NORTHERN DIVISION: At the Museum of Vertebrate Zoology, University of California, Berkeley. Time of meeting, 8 P. M., the third Thursday of every month. Take any train or car to University Campus. The Museum of Vertebrate Zoology is a large corrugated iron building situated on the south side of the campus immediately north of the football bleachers.



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THE CONDOR A MAGAZINE OF WESTERN ORNITHOLOGY.



Volume XVII

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A SUMMER AT FLATHEAD LAKE, MONTANA

By ARETAS A. SAUNDERS

WITH FOUR PHOTOS BY THE AUTHOR

THE SUMMER bird life of Flathead Lake, Montana, is already well known through the writings of Mr. P. M. Silloway in bulletins of the University of Montana and in THE CONDOR. The area, however, is a large one. Many parts of it have not yet been visited by an ornithologist, and conditions are changing as the country becomes more thickly settled, so that it is still possible to add more birds to the list or to get new facts about the species previously known.

I had the good fortune to spend the summer of 1914 at the Biological Station of the University of Montana, in the position formerly occupied by Mr. Silloway. The location of the station has been changed from its former position at the north end of Flathead Lake to a spot more centrally located on the east shore, at Yellow Bay. The country has been settled very rapidly. Many areas on the lake shore have been cleared and planted to orchards. The town of Big Fork has sprung up at the mouth of Swan River, the former site of the station, and the town of Polson at the southern end of the lake, near its outlet. It is feared that with changing conditions many of the larger and more picturesque species of birds are becoming scarce. At the same time many of the small song birds are increasing in numbers.

Bird life is very abundant at Yellow Bay, but the number of species that one may find within easy walking distance of the station is considerably less than at the old location at Big Fork. This is because there is less variety to the character of the surrounding country. The station is better equipped with boats than formerly, so that trips may be made in a short time to distant parts of the lake shore, and places not commonly visited in former years are now easy of access.

The Olive-backed Thrush (*Hylocichla ustulata swainsoni*) is by far the most abundant bird about the station. Up till late July these birds sang very frequently. Often eight different birds were heard in song at the same time. The songs were heard throughout the greater part of the day, only ceasing for a few hours at noon. This song, while pleasing at first, is of much poorer quality than the less frequent songs of other thrushes, so that in time it loses its charm and becomes decidedly monotonous. The nests of this thrush are easily found. They outnumbered all others to such an extent that I found an average of nearly three of them to one nest of any other bird.

I had not been at the station long before the first addition to the list of Flathead birds was made. This was a male Rocky Mountain Pine Grosbeak (*Pinicola enucleator montana*) that was discovered on the morning of June 27 by Dr. M. J. Elrod, Director of the Station, in the fir trees not far back of the Station building. We watched the bird for some time and easily identified it before it flew off. It is quite probable that this bird is a common summer resident of the higher mountains nearby, but what it was doing here in the Transition zone, and in the breeding season, is a puzzle. It was not seen again and probably returned to the higher mountains where it belonged.



Fig. 40. OSPREY ISLAND, FLATHEAD LAKE, MONTANA

On the same day that this bird was found, a trip was made to one of the numerous small islands near the southern end of the lake. A pair of Ospreys (*Pandion haliaetus carolinensis*) was occupying a large and conspicuous nest placed in a dead fir at one end of the island. Their presence here for a number of seasons had given this the name of Osprey Island. It is evident that the Osprey is one of the birds that is decreasing in numbers in this locality. Nests that had been occupied in former years were common about the lake shore; but this was the only occupied nest that I saw during the entire season. (See fig. 40.)

The top of Osprey Island is covered with a dense thicket of bushes, and about its edges are numerous dead fir stubs and a few live cottonwoods. The whole island is small, only a few acres in extent, but the bird life on it is abundant. Nests were numerous, and altogether I found on it, in the course of half an hour, more nests than I found in all other places about the lake put together during the entire summer. Yellow Warblers (*Dendroica aestiva aestiva*) were perhaps the most numerous, but Olive-backed Thrushes, Robins (*Planesticus migratorius propinquus*), and Catbirds (*Dumetella carolinensis*) were not far

behind in point of numbers. Tree Swallows (*Iridoprocne bicolor*) and Red-shafted Flickers (*Colaptes cafer collaris*) were nesting in the fir stubs, and several pairs of Juncos (*Junco hyemalis* subsp.?) were feeding young out of the nest. The number of nesting birds was remarkable and furnished a good example of the amount of bird life that a small area can support when it is isolated and thus protected from natural enemies.

On June 30 a party from the station visited Big Fork and Daphnia Pond at the north end of the lake. Here I was fortunate in finding three species not previously listed from Flathead Lake. The first of these was the Least Flycatcher (*Empidonax minimus*). A single individual of this species was in the cottonwood trees at the mouth of Swan River and was easily identified by the "chebec" call-note, a note which is totally different from that of other species of *Empidonax* found in this region.

I am of the opinion that the Least Flycatcher is increasing in numbers in Montana, moving westward in its range. Early records of the bird in the state



Fig. 41. A BAY IN WILD HORSE ISLAND, FLATHEAD LAKE, MONTANA

are few, but at present it is very common in cottonwood groves in many places east of the continental divide, notably at Bozeman, Livingston, Great Falls, Choteau, and probably other places. This bird appears to be the first one recorded west of the divide, but if my theory is correct it may be expected to become common in the region in the future.

The second new bird for the region found that day was the Cassin Vireo (*Lanivireo solitarius cassini*). Two individuals were seen in the trees near Big Fork. Later I found by careful observation that this bird is a fairly common summer resident in the fir forests about the lake. The following day, July 1, I secured one at Yellow Bay for more definite identification. This bird has evidently been previously overlooked in the region, owing to the similarity of its song to that of the commoner Red-eyed Vireo.

The third new bird was the Orange-crowned Warbler (*Vermivora celata* subsp.?), an individual of which was found in song in a large area of cut-over land on the road to Daphnia Pond. This bird was found in the same place a

few years ago by Mr. Silloway and noted in an unpublished manuscript of his now in the possession of Dr. Elrod. It is another bird that is probably increasing in numbers due to the increasing areas of cut-over land.

The west shore of Flathead Lake is in general quite different in character from the east shore. The soil is evidently drier and the rainfall is probably considerably less. The forests are largely confined to slopes of east and north exposure, while the other slopes are clothed only with open grass land. These forests are composed almost entirely of yellow pine, the other trees, such as Douglas fir, western larch and Engelmann spruce, being confined to a few scattered individuals. The bird life of the two shores consequently differs



FIG. 42. CANYON OF THE PEND D'OREILLE RIVER, MONTANA; NESTING GROUND OF THE VIOLET-GREEN SWALLOW

considerably, such species as the Audubon and Townsend warblers, the Kinglets and the Olive-backed Thrush, that are common on the east shore, being almost lacking here, while in the open pine forests Western Wood Pewees are the commonest birds, and in the grass lands Western Meadowlarks and Western Vesper Sparrows are abundant, all of these species being rare or local on the east side of the lake.

These conditions are found well illustrated on Wild Horse Island, the largest island in the lake. This island is near the west shore and almost directly across the lake from Yellow Bay. Here, on July 2, two more birds new to Flathead Lake were found. The first of these was the Pygmy Nuthatch (*Sitta pygmaea pygmaea*). I observed and later secured a single bird of this species in

the pines, and Dr. Elrod saw three more on another side of the island. The other new bird was the Prairie Falcon (*Falco mexicanus*), a male of which flew low over my head as I was adjusting my camera to take some pictures from the top of a high rocky hill on the west end of the island.

The mountains of the Mission Range nearest to Yellow Bay are rather low in elevation. Their sides have been burned repeatedly by forest fires, so that down timber, brush and thickets of young lodgepole pine make climbing very difficult. A trip made to the top of one of the peaks on July 16 was rather disappointing in the number of birds found. As we ascended the mountain most of the species found about the lake shore disappeared, while few of the

characteristic mountain birds were found to take their places. Juncos became more abundant and Townsend Solitaires (*Myadestes townsendi*) were found about some rocky cliffs. The Richardson Grouse (*Dendragapus obscurus richardsoni*) was perhaps the only bird that was really common. These were mostly females with broods of half-grown young. The females flew up into the trees at our approach, watching anxiously, while the young, which though able to fly showed little fear, remained nearer the ground.

On July 23 a trip was made to Polson, and thence down the Pend d'Oreille River to a rocky canyon about six miles below the outlet of the lake. Here the character of the country was quite different from any that we had visited previously. The region had never been visited by Mr. Silloway, so I had the good fortune to add two more birds to the Flathead Lake list that are not found in other localities of the region. The first of these was the Violet-green Swallow (*Tachycineta thalassina lepida*) that was breeding in considerable numbers in hollows of the limestone cliffs of the river canyon. Many of the young birds had left the nests and were perched in the tops of dead cottonwood trees along the river bank. From these perches they sallied forth on rather uncertain wings to meet the parents as the latter came with food. Several specimens, including young of the year, were secured. With the Violet-greens I found the second new bird of the day, the Rough-winged Swallow (*Stelgidopteryx serripennis*). Young of this species were also about. Two specimens secured included an adult and a young bird of the year. (See fig. 42.)

Hummingbirds are more abundant at Flathead Lake than I have found them elsewhere in Montana. Both the Rufous Hummingbird (*Selasphorus rufus*) and the Calliope Hummingbird (*Stellula calliope*) are common about the station at Yellow Bay. A nest of the latter species was found in one of the yellow pines in front of the station. A limb about six inches in diameter projected horizontally from the tree at a height of about 20 feet. On the under side of this limb was a short dead branch about an inch in diameter. The nest was saddled on this branch under the larger limb in such a way that it was protected both from the rain and from the rays of the sun. The nest was first discovered through the actions of the parent bird, which was very belligerent in protecting her home from all birds and other animals that approached too closely. A pine squirrel had ventured into the tree and the mother hummer chased it away immediately, following it a long way through the trees and darting at it first from one side and then from the other. The nest contained half-grown young when first found.

Infrequent feeding periods seem to be the rule with birds that feed by regurgitation. In this case the mother hummer fed her young in periods that averaged a little over half an hour apart. The feeding was in the usual hummingbird fashion, not differing perceptibly from the methods of the Ruby-throated and Rufous hummingbirds. The young left the nest about a week after it was found. We removed the nest later for better examination. It was a beautiful structure, built almost entirely of white cottonwood down, decorated on the outside like that of other hummingbirds with bits of green lichens.

During the first half of August I was away from Yellow Bay on a trip through the Glacier National Park. On my return, August 18, I found that the fall migration had started. Ring-billed Gulls (*Larus delawarensis*) were much more numerous about the lake than they had been in midsummer. Soli-

tary Sandpipers (*Helodromas solitarius cinnamomeus*) were seen occasionally, and on August 23 a small flock of Pectoral Sandpipers (*Pisobia maculata*) was noted. Eared Grebes (*Colymbus nigricollis californicus*) appeared on the waters of the lake, and some of the song birds, notably the Western Tanager (*Piranga ludoviciana*), had greatly decreased in numbers.

On the last day of my stay at the station, August 25, another new bird was added to the Flathead list. A swift flew over the station building, and hovered about long enough to be identified as a *Chaetura*. I did not see it closely enough to make sure of the species, but considering the locality there is little doubt but that it was Vaux Swift (*Chaetura vauxi*). This bird has been recorded but once previously from Montana, when a bird was taken at Silver, Missoula County, June 25, 1891 (Bendire, *Life Histories of North American Birds*, vol. II, 1895, p. 183). This is also in the western part of the state. Mon-



Fig. 43. NEST AND EGGS OF THE OLIVE-BACKED THRUSH, AT FLATHEAD LAKE, MONTANA

tana records of the Chimney Swift are equally rare and only from the extreme eastern part of the state. While visiting Mr. H. P. Stanford at his taxidermist shop at Kalispell the next day, he informed me that he had also seen swifts at Somers, at the north end of Flathead Lake, but did not know what kind they were.

I obtained from Mr. Stanford several records of other birds that are new to Flathead Lake, most of which are represented in his collection of mounted birds from this region. He possesses two good specimens of the Western Grebe (*Aechmophorus occidentalis*) which he states occurs regularly on Flathead Lake in September. There are no previously published records of this bird from Montana to my knowledge. He also has a specimen of the White-winged Scoter (*Oidemia deglandi*), and stated that he has mounted for others at least three specimens of the Surf Scoter (*Oidemia perspicillata*), both species being

fall migrants on the lake. The latter species is new to the state. He possesses an excellent mounted specimen of the Trumpeter Swan (*Olor buccinator*), which occurs in this region, as recently recorded by Mr. H. K. Coale (*Auk*, xxxii, 1915, p. 87.) There seem to be no published records of the Great Gray Owl (*Scotiaptex nebulosa nebulosa*) from the state, but Mr. Stanford has a mounted bird and states that the species is not uncommon about Kalispell in winter and that he has seen it in summer.

One change should be made in the subspecies of one of the birds breeding at Flathead Lake. A male Golden-crowned Kinglet, taken at Yellow Bay, June 25, proves to be the western bird (*Regulus satrapa olivaceus*), as identified for me by Dr. L. B. Bishop. This is the first bird of this species that I have taken in the state during the breeding season, but its subspecies is the same as that of fall migrant birds taken in other parts of the state.

I have questioned above the subspecies of Junco found here. Mr. Silloway listed it as the Shufeldt Junco (*Junco hyemalis connectens*), but the A. O. U. Check-List includes this region in the range of the Montana Junco (*J. h. montanus*). The birds as seen in the field certainly look like the Shufeldt, but I have taken no specimens.

I have also questioned the subspecies of Orange-crowned Warbler, and believe that the subspecific identities of a number of other species should be questioned. Flathead Lake, in addition to being west of the continental divide, is in a much more humid region than any other part of Montana, being more like northern Idaho and northeastern Washington in this respect. I would not be surprised to find that the subspecies of many such birds as the Orange-crowned Warbler, Song Sparrow, Towhee, Chickadee, Horned Lark, and Red-winged Blackbird are not what they were first reported to be, but are more like those of northern Idaho.

West Haven, Connecticut, February 16, 1915.

AN APPARENT HYBRID BETWEEN SPECIES OF THE GENERA

SPATULA AND QUERQUEDULA

By H. S. SWARTH

WITH ONE PHOTO

(Contribution from the Museum of History, Science and Art)

THE LOS ANGELES Museum of History, Science and Art has recently received as a gift a specimen of a duck presenting certain peculiar features. The bird was given to the Museum by Mr. A. E. Jackson, who shot it December 13, 1914, on the grounds of the Crescent Gun Club, near Del Rey, Los Angeles County, California. It was sent to the Museum in the flesh, and there made into a study skin.

The general appearance of the bird is such as strongly to suggest the possibility of its being a hybrid between the Shoveller (*Spatula clypeata*) and one of the species of *Querquedula*, the Cinnamon Teal (*Q. cyanoptera*) or the Blue-winged Teal (*Q. discors*). It is a male, but in the mottled plumage of the immature, and is probably a bird of the previous spring.

Coloration and markings are as follows: Chin and throat, immaculate, pale pinkish buff; sides of head, and sides and front of neck, with ground color of the same, thickly streaked and speckled with dusky; top of head dull blackish, the feathers narrowly edged with pinkish buff. The dusky of the top of the head merges into drab gray along the median line of the back of the neck. The feathers of the back are mostly plain blackish, unmarked, but with these there are other feathers intermixed, apparently remnants of the disappearing immature plumage, of the same ground color, but with edgings and crescentic cross markings of pale pinkish buff. Ground color of upper breast buffy, the feathers with blackish centers and broad, blackish, encircling ellipses. On the lower breast, abdomen and crissum, the ground color becomes decidedly reddish, close to brick red, and the dusky markings are isolated spots. A spot is present on nearly every feather. Sides and flanks with larger blackish

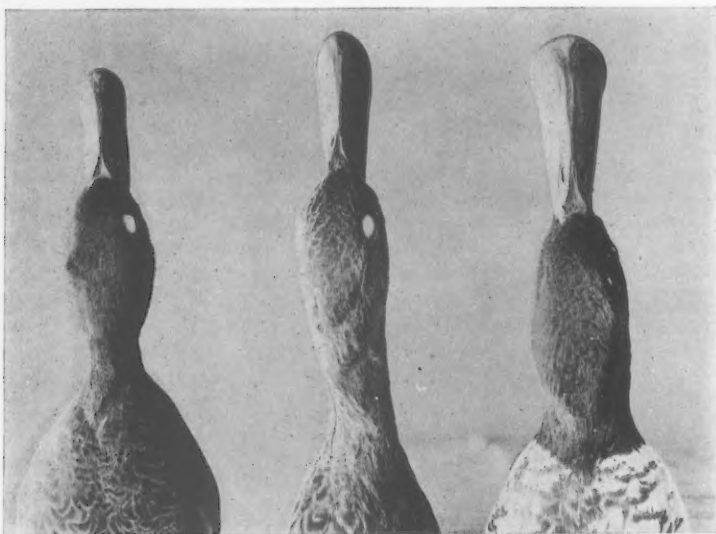


Fig. 44. FROM LEFT TO RIGHT: CINNAMON TEAL, SUPPOSED HYBRID, AND SHOVELLER; SHOWS RELATIVE SIZE AND PROPORTIONS OF BILL OF EACH

spots, and broad crescentic barring of dusky and buffy. In the under tail coverts new feathers are appearing, some black, others with fine vermiculations of white and black, or barred with black and buff. There is appearance as of a pure white area developing on either side of this tract.

The wings of the male Blue-winged and the Cinnamon Teal appear to be alike, and both seem to be indistinguishable in color and markings from the Shoveller. The bird under consideration has the wing of the same general type, blue lesser coverts, with narrow white band, and metallic green speculum. Bill blackish, feet yellowish, as in the immature male Shoveller. The bird is undergoing molt over much of the body, there being many old feathers on the back and a few on the breast. The lateral rectrices are old and frayed, but the central pair are new, and still partly ensheathed.

There is but little distinctive in the coloration of this bird to be seized upon as definitely determining its relationships, though its size and proportions are such as at once to attract attention. It is rather singular that upon careful analysis of colors and patterns there appears to be such a lack of recognizable characters of this sort serving to distinguish immatures of such widely different birds as are the Shoveller and the Cinnamon and Blue-winged Teals. The specimen in hand, an immature male, is in general appearance most suggestive of the Shoveller, but in coloration and pattern exhibits nothing that might not be included in the range of variation in any one of these species. The bill, of course, is the striking feature, for although less exaggerated than in the Shoveller, it is still of unwieldy size.

In the accompanying table of measurements comparison is made between the supposed hybrid and adult males of *Spatula clypeata*, *Querquedula cyanoptera*, and *Q. discors*. Analysis of the figures is of interest. The two teals are of approximately the same size, and it will be noted that the bird in question in its general proportions occupies a position almost exactly intermediate, between the teals on the one hand, and the Shoveller on the other. There are certain slight differences in measurements between the two species of *Querquedula*; and in every particular save in bill measurements our bird is nearer to *discors* than to *cyanoptera*. It would be unsafe to draw any inferences as to its parentage from this alone, however, for the crossing of the Cinnamon Teal with the Shoveller would naturally result in a bird somewhat larger than the former, hence in size rather nearer to *discors*. The foot measurements of the supposed hybrid are noteworthy, for though a relatively large bird, as compared with the teal, these measurements are almost exactly as in *discors*.

MEASUREMENTS IN MILLIMETERS OF ADULT MALES OF SHOVELLER, CINNAMON TEAL, BLUE-WINGED TEAL, AND SUPPOSED HYBRID

	<i>Spatula</i> <i>clypeata</i> no. 415 ¹	Hybrid	<i>Querquedula</i> <i>cyanoptera</i> no. 178 ¹	<i>Querquedula</i> <i>discors</i> no. 3955 ²
Length of wing.....	243	200	179	189.5
Length of tail.....	85.5	70	62	68.2
Exposed culmen.....	67.2	50	44	42
Length of bill from anterior end of nostril....	49	39.5	34.2	32.5
Greatest width of bill.....	29.8	21	18	16
Width of bill at narrowest point.....	14.5	13.5	17	13.5
Depth of upper mandible at base.....	15.8	15	14.2	13.8
Length of tarsus.....	37	32	33	32
Length of middle toe without claw.....	43	38	39.5	37

¹Collection of Museum of History, Science and Art.

²Collection of F. S. Daggett.

Though the coloration of this bird is, as stated above, of an undecisive nature, there is one feature that is worth notice. The appearance of the lower breast and abdomen, reddish ground color with black spots, is at once suggestive of the adult male of the Blue-winged Teal, and in fact it is very closely similar to the markings in the single bird of that species I have had for comparison.

After all, however, details of coloration do not help much, for in any case a mixed parentage, with the Shoveller on one side, and either of the teals of the genus *Querquedula* on the other, might produce the result before us. It seems safe to say, though, that some one of these combinations must have occurred. Only the Shoveller could have produced such a bill, modified as it is, and only

the combination of a teal with the Shoveller could have caused the general reduction in size. Also it seems safe to say that had the teal been of the genus *Nettion* some one of the distinctive peculiarities of that group would have appeared in the offspring.

In southern California the Blue-winged Teal is such a rarity that one is apt to jump to the conclusion that the bird in hand must be the result of the combination of the Cinnamon Teal and the Shoveller. If this bird were known to have been hatched in the same general region in which it was shot this assumption might be justified, but as it may well have been a migrant from farther north, where the Blue-winged Teal breeds, it is unsafe to draw such a conclusion.

Among the ducks aberrant individuals combining the characters of two distinct species are of not uncommon occurrence, and from the way in which the Anatidae have been divided generically, this usually means hybridization between distinct genera, rather than merely between species of the same genus. Several combinations have been recorded from time to time, perhaps the most common being the mixture of the features of the Mallard (*Anas platyrhynchos*) and the Pintail (*Dafila acuta*). Usually such individuals have been regarded as the offspring of diverse parentage, as "hybrids" in fact, rather than as "mutants", suddenly developing peculiar characters. The present writer has examined perhaps ten or twelve such doubtful birds, and in each case the theory of hybridization seemed to be the more plausible explanation of conditions.

The arguments already set forth by Allen (*Science*, n. s., vol. 22, 1905, pp. 431-434) in similar cases among other groups of birds, apply with equal force to the ducks. Among the ducks there is an added factor, as with these birds more than with any others there is the possibility of crippled birds being forced to remain at points outside the normal breeding range, among individuals of other species. In such cripples loss of flight is frequently the only disability, the birds being otherwise strong and healthy, and under such conditions it is not extraordinary that there is occasional indiscriminate pairing of individuals belonging to different races.

Museum of History, Science and Art, Los Angeles, California, February 6, 1915.

AN ANNOTATED LIST OF THE BIRDS OF KOOTENAI COUNTY, IDAHO

By HENRY J. RUST

WITH MAP AND FOUR PHOTOS BY THE AUTHOR

KOOTENAI County comprises a larger portion of northern Idaho known as the Panhandle. It is bounded on the north by Bonner County, which was created by cutting off the northern half of Kootenai County, on the east extends almost to the Montana boundary line, and is bounded on the west by the State of Washington.

There is but little level prairie land in the County; of fifty-nine townships, less than four are level and about two rolling prairie, the balance being hilly or mountainous.

Lake Coeur d'Alene is the largest body of water in the County, being twenty-two miles in length, narrow in width, with an area of 41.4 square miles, and with a shore line of 103 miles. Its general trend is north and south; elevation 2120 to 2136 feet. The Coeur d'Alene mountains, north and east of the Lake, are a continuation of the Bitterroot Range; in them the Coeur d'Alene River rises and flows into the southern end of the lake. Five miles farther south the St. Joe River forms the other principal tributary. The Spokane River is the outlet of the lake, and empties into the Columbia about seventy-five miles northwest from the lake.

Fernan Lake is a small body of water situated a short distance from Coeur d'Alene City. The lake is fed by a small creek bearing the same name, which flows through an alder swamp of nearly 100 acres extent at the east end of the lake. In this swamp and on the hills surrounding Fernan Lake I have observed 76 species of birds. Coeur d'Alene Lake and also the smaller lakes are encircled with hills which at one time were covered to the shores with a dense growth of yellow pine and fir, but in the past few years have been denuded to a great extent by forest fires and logging operations. These hills are now growing up with dense stands of young Douglas fir, white fir, western larch, lodgepole pine and yellow pine. The more open hillsides and ridges are covered with a thick growth of shrubs, mainly ocean spray (*Schizonotus discolor*), ninebark (*Opulaster pauciflorus*), buckbrush (*Ceanothus sanguineus*), sticky laurel (*Ceanothus velutinus*), and serviceberry (*Amelanchier alnifolia*). The undergrowth on the low hills is mostly composed of *Pachistima myrsinites*, thimble berry (*Rubus parviflorus*), braeken fern, Oregon grape, and occasion-



Fig. 45

ally large patches of kinnikinnick, the berries of which are a favorite food of the Ruffed Grouse.

The slopes of the higher ranges including the Coeur d'Alene Mountains, which have escaped the ravages of extensive forest fires in the past six years, are covered with dense stands of white pine and Douglas fir, the open ridges and burned over areas being grown up with shrubs similar to lower hills. The kinnikinnick is replaced by large patches of blueberry, a haunt of the Richardson Grouse. The numerous mountain streams are lined with a growth of willows, alder, and *Spirea menziesii*, which latter becomes very dense in shady places near sources and outlets. Where streams flow into lakes there are often flats several acres in extent which are subject to overflow in the spring.



Fig. 46. TOWNSITE OF COEUR D'ALENE, IDAHO; HEAD OF SPOKANE RIVER AND FORT SHERMAN MILITARY RESERVATION IN FOREGROUND

Many of the flats are covered with a growth of tules, water grasses, willows, and *Spirea menziesii*, and are bordered with a few cottonwood and aspen and inhabited by a number of species of birds that prefer deciduous timber and marshy ground.

The scarcity of ducks and the absence of many species of shore birds in this vicinity may be due to several causes: A general decrease in numbers of waterfowl as residents and migrants, and by a lack of feeding and breeding grounds. In former years the St. Joe marshes, and a large marsh about one and a half miles west of the city, locally known as meadows, were frequented by a large number of waterfowl, many of them breeding in seclusion. Present conditions are greatly changed by continuation of high water throughout the

year, caused by the Washington Water Power Company in Spokane River at Post Falls.

The annual spring thaw and melting of deep snow in the mountains causes a heavy rise of the water lasting till the early part of June, and with the backing up of low water of the lake caused by the dam, a greater part of the marshes, flats and shores are covered to such a depth that very few species of birds are to be found. A large portion of the southern end of the lake, Chateoilet Lake and St. Joe Valley were formally included in the Coeur d'Alene Indian reservation and being free from settlement offered seclusion to many waterfowl. The opening of this reservation to settlement in 1906 has had a tendency to lessen the numbers of shore birds and Anatidae formerly seen in this locality.

One-fourth of the area of Kootenai County is embraced in the Coeur d'Alene National Forest Reserve; also a small portion including Chateoilet Lake has been set aside as a State Park. As Chateoilet Lake has always been a favorite resort of waterfowl, it is hoped the protection now offered will tend to increase the numbers as well as species. The protection offered by the Forest Reserve may in time have a noticeable effect in the increase of many species which prefer the dense coniferous timber, and mountainous regions. The old Fort Sherman military reservation, which was well represented in species, was abandoned in 1898 and later sold at public auction. It is now well built up and is a continuation of Coeur d'Alene City. (See fig. 46.)

The following list of species has been prepared from personal observations dating from March, 1910, to December, 1914. Species marked with an asterisk are, to the best of my knowledge, new records for this vicinity. In the preparation of the list I desire to express my obligations to Mr. J. Grinnell and to the Smithsonian Institution, for assistance in identifications of specimens, and to Mr. F. A. Shallis, a local taxidermist, for the privilege of examining and measuring a number of specimens in the flesh.

Aechmophorus occidentalis. Western Grebe. Not common fall and winter visitor on Lake Coeur d'Alene; also seen on Fernan Lake. Most frequently observed from September to December. A few may remain throughout mild winters when the lakes do not freeze over.

Colymbus nigricollis californicus. Eared Grebe. Rare in this locality. One adult specimen examined October 9, 1912, taken on Lake Coeur d'Alene. (Recorded in CONDOR, xv, p. 41.)

Podilymbus podiceps. Pied-billed Grebe. Not common fall and winter visitant on Lake Coeur d'Alene. Largest numbers noted on the lake during the month of November, 1914.

Gavia immer. Common Loon. Rare resident. Several young seen on Fernan Lake in fall; and young males examined, taken on Lake Coeur d'Alene.

Gavia stellata. Red-throated Loon. Rare. One specimen examined, a young female, taken on Lake Coeur d'Alene, October 6, 1912. (Recorded in CONDOR, xv, p. 41.)

Larus delawarensis. Ring-billed Gull. Not common fall and winter visitor on Lake est numbers seen on Lake Coeur d'Alene, during the fall of 1912. Very few noted in 1913-14.

Larus philadelphia. Bonaparte Gull. Not common fall and winter visitor on Lake Coeur d'Alene.

**Sterna hirundo*. Common Tern. Rare. One specimen examined, taken on Lake Coeur d'Alene.

**Hydrochelidon nigra surinamensis*. Black Tern. Fairly common on St. Joe marshes in June, 1914; probably breeding. One seen at Hayden Lake in June, 1914.

Mergus americanus. American Merganser. Rare fall and winter visitor. Two adult males examined, taken at Hayden Lake, November 19, 1914.

Mergus serrator. Red-breasted Merganser. Becoming rare. One specimen examined, taken on Lake Coeur d'Alene.

Lophodytes cucullatus. Hooded Merganser. Not common; occasionally seen in the fall on St. Joe River and Chatcolet Lake.

Anas platyrhynchos. Mallard. Rare resident, and migrant. At one time the most abundant duck in this locality.

Mareca americana. Baldpate. Becoming rare. Occasionally seen in the fall on St. Joe marshes.

Nettion carolinense. Green-winged Teal. A small flock seen on Coeur d'Alene River, August 18, 1910. A few taken on St. Joe marshes in the fall.

Querquedula cyanoptera. Cinnamon Teal. Becoming rare. One specimen examined, taken on St. Joe marshes.

Spatula clypeata. Shoveller. Fairly common in the fall on St. Joe marshes; may breed.



Fig. 47. VIEW SHOWING PORTION OF FERNAN LAKE AND SURROUNDING HILLS, IDAHO; LOOKING EAST

Aix sponsa. Wood Duck. Becoming rare. Two specimens examined September 22, 1912, taken on St. Joe marshes.

Charitonetta albeola. Bufflehead. Not common; a few seen in fall on Lake Coeur d'Alene. Also seen on Fernan Lake.

Histrionicus histrionicus. Harlequin Duck. Rare. One specimen examined, taken on St. Joe marshes.

**Oidemia deglandi*. White-winged Scoter. Common on Lake Coeur d'Alene from October 20 to December 1, 1913. A number of specimens examined were young females.

Oidemia perspicillata. Surf Scoter. Rare fall migrant. One adult male examined, taken on Fernan Lake, October 9, 1912. (Recorded in CONDOR, xv, p. 41.)

Erismatura jamaicensis. Ruddy Duck. Common fall migrant, occurring in largest numbers after severe storms.

Branta canadensis canadensis. Canada Goose. Until recent years large flocks of Canada Geese passed over the city on their way south during the month of November, and also on returning on their northern spring migration. Large flocks would stop to

rest at the southern end of the lake and on St. Joe marshes. A few would spend the day in the grain fields in the Palouse farming district and return to the sheltered bogs of the lake to spend the night. During the fall and winter of 1913, I failed to see or hear any migrant flocks and none for the fall of 1914. Very few Geese have been seen on the lake for several years past. If migrations still continue over the same course the birds must pass over late at night and high up. They may be diminishing fast in numbers.

**Olor buccinator.* Trumpeter Swan. Rare fall migrant; occasionally seen at southern end of lake. One seen on Lake Chatcolet October 30, 1914.

Botaurus lentiginosus. American Bittern. Rare resident of the marshes. Taken at meadows, Lake Coeur d'Alene; also on Fernan alder swamp.

**Ardea herodias herodias.* Great Blue Heron. Rare fall and winter visitor. Three specimens examined: One taken on marsh, Fernan Lake; two specimens taken along St. Joe River,—one being an adult male, February 14, 1913.

Porzana carolina. Sora Rail. Rare resident of the marshes; one specimen examined.

Fulica americana. American Coot. Fairly common in fall on open water. Large numbers congregate on Chatcolet Lake since the passage of the law prohibiting the use of motor boats in hunting water fowl on the lake.

Lobipes lobatus. Northern Phalarope. Rare fall migrant. One specimen noted on Lake Coeur d'Alene.

Recurvirostra americana. Avocet. Rare. One specimen examined, taken on St. Joe marshes.

Gallinago delicata. Wilson Snipe. Rare fall migrant. One seen at meadows, Lake Coeur d'Alene, September 13, 1913. Two taken at Chatcolet Lake in September, 1914.

Actitis macularius. Spotted Sandpiper. Fairly common summer resident along shores of the lakes in Kootenai County. One taken at Fernan Lake, May 17. Nest with four eggs found in a field near Fernan Lake shore, June 27, 1914.

Squatarola squatarola. Black-bellied Plover. Rare. One specimen examined, taken on St. Joe marshes.

Oxyechus vociferus vociferus. Killdeer. Not common summer resident, breeding in suitable localities. Earliest record for spring arrival, March 9, 1913. None seen after September 1.

**Colinus virginianus.* Bob-white. Owing to nearness to Spokane Prairie, Washington, a number of pairs of quail have shifted into this vicinity, nesting in meadows and grain fields, and raising large broods; but owing to the open season during the month of November, and deep snow in winter, there is little chance of them becoming plentiful.

Dendragapus obscurus richardsoni. Richardson Grouse. Fairly common resident throughout the mountains; most plentiful in Coeur d'Alene National Forest reserve.

Bonasa umbellus togata. Canadian Ruffed Grouse. Common resident in coniferous timber and thickets. More abundant during the season of 1914 than for many years past.

**Bonasa umbellus sabini.* Oregon Ruffed Grouse. Observed for the first time during the fall of 1914. Two specimens taken and two others seen. Skins are identical with those taken in the vicinity of Portland, Oregon. With the exception of one specimen taken in deciduous thickets at Fernan Lake, this race was seen only in lodgepole pine thickets on the prairie, north of the city.

Pedioecetes phasianellus columbianus. Columbian Sharp-tailed Grouse. Becoming rare as a resident; occasionally seen in fall in small flocks on the prairie, north of the city.

**Phasianus torquatus.* Mongolian Pheasant. One specimen examined, found frozen in ice on Fernan Lake in December, 1913.

Zenaidura macroura marginella. Western Mourning Dove. Fairly common summer resident, nesting in pine timber on open ridges and hillsides. Congregates in small flocks on fields in latter part of August. Nest with two fresh eggs found in small pine on Tubbs Hill, June 26, 1912.

Cathartes aura septentrionalis. Turkey Vulture. Occasionally seen during the summer.

Circus hudsonius. Marsh Hawk. Not common resident and migrant; seen in Fernan alder swamp and at meadows, Lake Coeur d'Alene.

Accipiter velox. Sharp-shinned Hawk. Fairly common summer resident, remaining late in fall. A pair noted May 10, probably nested in dense fir timber on Fernan Ridge. Nest with five eggs on Tubbs Hill, June 15; young hatched during first week in July. Young taken in dense haw thicket on Fernan Creek, December 2.

**Buteo borealis calurus*. Western Red-tailed Hawk. Rare summer resident, a few pairs breeding in tall pines on the mountain sides. One specimen taken at Cougar Gulch, March 14, 1913. Food contents, small snake; from color of bits of skin judged it to be the common water snake.

Buteo swainsoni. Swainson Hawk. Rare. Three young specimens examined in September, 1913.

Archibuteo lagopus sancti-johannis. Rough-legged Hawk. Several seen along St.



Fig. 48. VIEW SHOWING GENERAL FEATURES OF THE MOUNTAINOUS COUNTRY AROUND COEUR D'ALENE, IDAHO; RIDGE IN FOREGROUND, ALTITUDE 4859 FEET, WAS SWEEPED BY FIRE IN 1910; GROWTH OF BLUEBERRY ON RIGHT-HAND, NORTH-FACING, SLOPE

Joe River late in fall. One specimen examined, taken along St. Joe River, December 20, 1912.

Haliaeetus leucocephalus. Bald Eagle. Rare resident. A few young seen in fall, but no adults for several years.

Falco mexicanus. Prairie Falcon. Rare. One specimen examined, taken November 6, 1912. (Recorded in CONDOR, xv, p. 41.)

**Falco columbarius columbarius*. Pigeon Hawk. Rare. One specimen examined, taken at Echo Bay, Lake Coeur d'Alene.

Falco sparverius phalaena. Desert Sparrow Hawk. Fairly common summer resident in timber along edge of prairie, west and north of the city.

Pandion haliaetus carolinensis. American Osprey. Not common summer resident, along rivers and lakes, nesting in tall cottonwoods.

Asio wilsonianus. Long-eared Owl. One specimen taken in dense fir near edge of swamp at meadows, Lake Coeur d'Alene, September 13, 1913.

Asio flammeus. Short-eared Owl. Not common. Two specimens examined.
**Scotiaptex nebulosa nebulosa*. Great Gray Owl. Rare winter visitor. One specimen taken at Mica Bay, Lake Coeur d'Alene, December 4, 1914; adult female.

Cryptoglaux funerea richardsoni. Richardson Owl. Rare winter visitor. One specimen seen.

Cryptoglaux acadica. Saw-whet Owl. One specimen examined.

**Otus flammeolus*. Flammulated Screech Owl. Not common. One specimen examined, taken in dense thicket near Fernan Lake, September 28, 1914.

Bubo virginianus pallescens. Western Horned Owl. Fairly common resident; most frequently seen in September and October.

Bubo virginianus subarcticus. Arctic Horned Owl. Rare fall and winter visitor. Two specimens examined, one taken at Bennett's Bay, Lake Coeur d'Alene, October 28, 1912. (Recorded in CONDOR, xv, p. 41.)

Bubo virginianus saturatus. Dusky Horned Owl. Frequently seen in the fall in dense timber and swamps. Four specimens examined, one taken near edge of swamp at meadow, Lake Coeur d'Alene, September 13, 1913.

Nyctea nyctea. Snowy Owl. Rare winter visitor. One specimen examined, taken in city limits.

Glaucidium gnoma. Pygmy Owl. Frequently heard and seen during the months of September and October; may be resident.

Ceryle alcyon. Belted Kingfisher. Common summer resident along streams and lake shores.

**Dryobates villosus monticola*. Rocky Mountain Hairy Woodpecker. Common resident throughout the heavy timber. Have often seen *D. v. monticola* feeding on frozen apples remaining on trees, during the cold weather, within city limits.

Dryobates pubescens homorus. Batchelder Woodpecker. Not common resident. Two specimens collected in alder swamp at head of Fernan Lake.

Picoides arcticus. Arctic Three-toed Woodpecker. Male and female collected from tall dead pine near Garwood, September 29, 1914; only specimens that I have seen or taken.

Sphyrapicus varius nuchalis. Red-naped Sapsucker. Nest containing young found June 6, 1914, in tall hemlock stub near Kelly meadow, French Gulch. Both parents were busy feeding young. Several specimens collected; one near Fernan Lake in dense thicket, and one in alder thicket near Mica Bay.

Phloeotomus pileatus abieticola. Northern Pileated Woodpecker. Not common resident of the heavily timbered hillsides and ridges.

Colaptes cafer collaris. Red-shafted Flicker. Common summer resident, a few remaining through the winter. Winter records, November 28, December 8, February 10 and 22.

**Chordeiles virginianus henryi*. Western Nighthawk. Common summer resident, arriving the first week in June and departing by middle of September. Nests on Tubbs Hill, Fernan ridges, and occasionally on prairie land.

**Chordeiles virginianus hesperis*. Pacific Nighthawk. Female and eggs collected June 27, 1914; nesting on high open ridge near Fernan Lake.

Archilochus alexandri. Black-chinned Hummingbird. Not common summer resident. Nest with two eggs found on Fernan Creek, June 8.

Selasphorus rufus. Rufous Hummingbird. Occasionally seen in May and June in city limits among bright-colored flowers.

Stellula calliope. Calliope Hummingbird. Not common summer resident. Have observed several pairs that were nesting in dense pine thickets, but have been unable to locate any nests.

Tyrannus tyrannus. Kingbird. Not common summer resident, nesting in bushes along St. Joe and Spokane rivers.

Tyrannus verticalis. Western Kingbird. Rare summer resident. One pair with young; nest on cross-bar of pole carrying high tension electric wire, on prairie near Post Falls, July 5, 1913.

Sayornis sayus. Say Pewee. Not common summer resident; occasionally seen in city limits.

Nuttallornis borealis. Olive-sided Flycatcher. Not common summer resident in the mountains.

Myiochanes richardsoni richardsoni. Western Wood Pewee. Common summer resident, many nesting in pines in city limits.

Empidonax hammondi. Hammond Flycatcher. One specimen taken in alder thicket near Fernan Lake shore, August 1, 1914.

Empidonax wrighti. Wright Flycatcher. Not common summer resident in dense thickets. Specimen taken in dense fir thicket on Tubbs Hill, May 25, and in alder thicket in Fernan swamp, September 1.

Otocoris alpestris merrilli. Columbian Horned Lark. Common summer resident on the prairie, west and north of the city.

Pica pica hudsonia. Black-billed Magpie. Common fall and winter visitor, generally arriving early in September, remaining throughout the winter, and migrating early

in spring. Earliest record of arrival, August 27, 1914.

Cyanocitta stelleri annectens. Black-headed Jay. Common resident; most numerous in dense wooded canyons and swamps.

Perisoreus canadensis capitalis. White-headed Jay. Not common resident in the mountains.

Corvus corax sinuatus. Western Raven. Three seen April 20, 1913; one specimen examined.

Corvus brachyrhynchos hesperis. Western Crow. Not common summer and fall resident of the St. Joe Valley.

Nucifraga columbiana. Clarke Nutcracker. Irregular fall and winter visitor; abundant during good cone seasons. Abundant from October, 1911, to December 28, 1912; none seen again until August 11, 1914, the earliest date I have noted them. As they feed principally on the seeds of the western yellow pine in this vicinity, the irregularity of occurrence could be caused by pine-cone crop, which is heavy every two to four years.

Dolichonyx oryzivorus. Bobolink. Rare summer resident of St. Joe marshes. Several seen in tall grass in meadow near Wolf Lodge creek.

**Xanthocephalus xanthocephalus*. Yellow-headed Blackbird. Rare summer resident of the marshes. Two specimens examined, taken on St. Joe marshes.

Agelaius phoeniceus neutralis. Columbian Red-wing. Not common summer resident; a few pairs nest in cat-tail marsh at meadow, Lake Coeur d'Alene.

Sturnella neglecta. Western Meadowlark. Common summer resident of the prairie west and north of the city. Earliest date of arrival, March 27. One seen October 31, on prairie near Post Falls.

Icterus bullocki. Bullock Oriole. Rare summer resident; one specimen seen.

Euphagus cyanocephalus. Brewer Blackbird. Not common summer resident; a few may remain throughout the winter. Small flock observed March 9, 1913, in tall



Fig. 49. NORTH FORK OF COEUR D'ALENE RIVER, ALTITUDE 2894 FEET, NEAR SOURCE IN COEUR D'ALENE MOUNTAINS, IDAHO

cottonwoods along bank of Spokane River; small flock seen in willow thicket, Fernan Lake, September 6.

Hesperiphona vespertina montana. Western Evening Grosbeak. Common resident. Large flocks frequently observed in city limits during the fall and winter, feeding in pines. Their loud whistling notes are often heard in the spring, after which they appear to break up into small flocks or pairs, and retire to the heavy timber in the mountains, returning again in large flocks the latter part of September. Male and female together noted August 19, on high wooded ridge near Fernan Lake. Flock of about 30 young seen September 1; one young female collected.

Carpodacus cassinii. Cassin Purple Finch. One pair observed in city limits June 18, 1914.

Loxia curvirostra minor. American Crossbill. Common resident; numerous flocks seen in city limits throughout the fall and winter, retiring to the wooded hillsides during nesting season. Females with young able to fly noted May 4. February 21, 1913, I noted a pair of crossbills carrying nest material—long blades of dry grass obtained from small spots where the snow had melted—up into a dense-crowned tall lodgepole pine. I was unable to locate any nest, and on returning the next day failed to find any further evidence of nesting, not seeing the birds again in same locality.

Acanthis linaria linaria. Redpoll. Not common winter visitor. Small flock observed in city limits, April 15.

Astragalinus tristis pallidus. Western Goldfinch. Not common summer resident. A pair noted on brushy hillside, June 14; from their actions judged them to be breeding, but was unable to locate any nest.

Spinus pinus pinus. Pine Siskin. Abundant resident. Common in city limits; young Siskins able to fly, noted June 17.

**Passer domesticus*. English Sparrow. A small flock arrived in the spring of 1909. They have multiplied rapidly and are now very common within the city limits; also in other towns in the county. A favorite nesting site is the top fold of awnings after these have been rolled up during the winter. In the spring, when the sun grows bright and the awnings are lowered, sparrow nests in various stages of construction, eggs, and often young birds, are scattered along the edge of the street curbing.

Plectrophenax nivalis. Snowflake. Rare irregular winter visitor. One specimen seen.

Passerculus sandwichensis alaudinus. Western Savannah Sparrow. Common summer resident of the meadows. Several specimens taken September 29, in small meadow near Garwood.

Zonotrichia leucophrys gambeli. Gambel Sparrow. Abundant fall migrant. Observed in large numbers during the months of September and October in thickets and on brushy hillsides.

Spizella passerina arizonae. Western Chipping Sparrow. Abundant summer resident. First arrivals noted by middle of April, becoming common by first of May. Young and old congregate in large flocks along edges of fields and thickets from early part of August to latter part of September, when they begin to migrate; one seen October 8. Nest with four eggs found in spirea bush, June 11; nest with half-grown young found in haw bush, June 14; young able to fly June 18.

**Junco hyemalis montanus*. Montana Junco. Common summer resident, arriving as early as February 22, becoming common by first week in April. Pair noted gathering nest material March 27; five nests, each containing five eggs, examined May 8; young able to fly, May 19; nest with five newly hatched young, June 18; nest with five fresh eggs, June 27. The Juncos begin to congregate in flocks along roadsides and thickets by the middle of August, and migrate early in October.

Melospiza melodia merrilli. Merrill Song Sparrow. Common summer resident in swamps and thickets along mountain streams and lakes. A few remain throughout the winter in sheltered situations. Often seen around old brush-piles and outbuildings within the city limits during the winter.

**Melospiza lincolni lincolni*. Lincoln Sparrow. One specimen taken in grassy meadow near Garwood, September 29, 1914.

Pipilo maculatus montanus. Spurred Towhee. Common summer resident of the brushy hillsides and draws, arriving by April 15. Last seen September 3. Young, first brood, able to fly, May 18; second brood, June 30.

Zamelodia melanocephala. Black-headed Grosbeak. Not common summer resident; most frequently observed in coniferous timber in canyons near east end of Fernan Lake.

Piranga ludoviciana. Western Tanager. Not common summer resident of the coniferous timber.

Petrochelidon lunifrons lunifrons. Cliff Swallow. Common summer resident, nesting under eaves.

Hirundo erythrogastra. American Barn Swallow. Fairly common summer resident. Migration dates, May 28-30, first week in September.

Iridoprocne bicolor. Tree Swallow. Common summer resident, nesting in cottonwoods along river and lake shores.

Riparia riparia. Bank Swallow. Not common summer resident. Small colony nests in banks of deep sand-pit and railroad, within the city limits.

Bombycilla garrula. Bohemian Waxwing. Common fall and winter visitor. Large flocks seen in city limits from latter part of November to middle of December, feeding on mountain ash berries. Many mountain ash are used as shade and ornamental trees in the city. Migration dates, November 18 and March 4.

Bombycilla cedrorum. Cedar Waxwing. Not common summer resident. Nest with three fresh eggs, seven feet from ground in haw bush, Fernan Creek, June 28.

Lanius borealis. Northern Shrike. Rare winter visitor. One seen at Kelly meadow in January, 1913; one seen in city limits, December 21, 1914.

Vireosylva olivacea. Red-eyed Vireo. Common summer resident of the deciduous thickets. Nest with four eggs, incubation slight, in red osier five feet from ground in alder swamp, at east end of Fernan Lake, June 27.

Vireosylva gilva swainsoni. Western Warbling Vireo. Common summer resident of the thickets.

Lanius borealis. Northern Shrike. Rare winter visitor. One seen at Kelly meadow in January, 1913; one seen in city limits, December 21, 1914.

Dendroica aestiva. Yellow Warbler. Common summer resident of the brushy hillsides. Nest with four eggs found in spirea bush on Tubbs Hill, June 11. Young Yellow Warblers able to fly, June 14.

Dendroica auduboni auduboni. Audubon Warbler. Abundant summer resident, nesting in coniferous timber on hillsides. Common in city limits after young are able to fly. Departs early in October.

Dendroica townsendi. Townsend Warbler. Not common summer resident in dense thickets and timber. Specimen taken in an alder thicket at Fernan Lake, June 28.

Oporornis tolmiei. Tolmie Warbler. Not common summer resident in swampy thickets. Several seen on brushy hillsides.

Geothlypis trichas occidentalis. Western Yellow-throat. Not common summer resident in deciduous thickets in vicinity of water.

Setophaga ruticilla. American Redstart. Fairly common summer resident in deciduous thickets.

Anthus rubescens. American Pipit. Not common fall migrant.

Cinclus mexicanus unicolor. American Dipper. Not common, but of regular occurrence along mountain streams. One seen along Fernan Creek, October 25.

Dumetella carolinensis. Catbird. Not common summer resident; nesting in willow thickets; young able to fly, July 10.

Troglodytes aedon parkmani. Western House Wren. Not common summer resident; often found nesting in old vacant buildings within the city limits.

Nannus hiemalis pacificus. Western Winter Wren. Fairly common resident in coniferous timber. Frequently observed in dense deciduous thickets and swamps.

Certhia familiaris montana. Rocky Mountain Creeper. Not common resident in coniferous timber. Specimen taken December 29; occasionally seen during the summer.

Sitta carolinensis aculeata. Slender-billed Nuthatch. Not common resident of coniferous timber. Occasionally seen within the city limits.

Sitta canadensis. Red-breasted Nuthatch. Common resident; frequently observed in pine thickets within the city limits.

Sitta pygmaea. Pygmy Nuthatch. Abundant resident. Common within the city limits. Several pairs noted nesting in tops of telephone poles.

**Penthestes atricapillus septentrionalis*. Long-tailed Chickadee. Common resident; frequently seen in city limits. Nest with seven eggs in birch stub on French Gulch Creek, May 30.

Penthestes gambeli gambeli. Mountain Chickadee. Abundant resident; common within the city limits.

Penthestes rufescens rufescens. Chestnut-backed Chickadee. Not common resident. Occasionally seen in alder swamp at east end of Fernan Lake.

Regulus satrapa olivaceus. Western Golden-crowned Kinglet. Abundant resident of coniferous timber and thickets.

Myadestes townsendi. Townsend Solitaire. Not common winter visitor. Specimens collected in city limits, January 10, 1913.

Hylocichla ustulata swainsoni. Olive-backed Thrush. Common summer resident of the dense thickets. Nest with four fresh eggs in small fir tree on brushy hillside, June 27.

**Hylocichla guttata guttata*. Alaska Hermit Thrush. Several seen in dense thickets in September; specimens collected September 12 and 24.

Planesticus migratorius propinquus. Western Robin. Abundant summer resident; a few may remain during mild winters. Earliest migration date, February 11; fall migration in October.

Ixoreus naevius naevius. Varied Thrush. Fairly common resident, preferring dense thickets along canyon streams and swamps.

Sialia mexicana occidentalis. Western Bluebird. Common summer resident. Spring migration, first week in March; fall, middle of October.

Sialia currucoides. Mountain Bluebird. Common summer resident, arriving the first week in March. Fall migration in October.

Cocur d'Alene, Idaho, January 5, 1915.

FROM FIELD AND STUDY

A Northern Winter Record of the Phainopepla.—On February 12, 1915, after a severe and protracted storm, I collected an adult female Phainopepla (*Phainopepla nitens*) within the city of Marysville, California. The species is rare in this vicinity; even in summer its appearance is quite casual. When discovered, this individual was feeding upon a cluster of mistletoe berries in a black walnut tree. It was not particularly shy and was reluctant to desert such an excellent feeding ground, as I found when I attempted to frighten her from the place. She refused to leave, and, after circling widely, returned to the tree. Examination of the bird in hand showed it to be in apparent good health, and the body was very fat. The stomach was distended with the mistletoe berries.—CARL S. MULLER, Marysville, California.

Three New Records for Kansas.—In a preliminary examination of a collection of bird skins made personally at Independence, southeastern Kansas, in 1904 and 1905, three forms have been identified that apparently have not been previously recorded from that State. All are Lower Austral forms ranging up from the south along the valley of the Verdigris River.

A Flicker (male, no. 584, coll. A. W.), taken November 28, 1904, is *Colaptes auratus auratus*, as it has a wing measurement of only 151.3 millimeters. The Northern Flicker occurs also as a winter migrant, and is represented by specimens in the collection.

Two Downy Woodpeckers secured are *Dryobates pubescens pubescens*. These specimens have the following measurements (in millimeters):

	Wing	Tail
No. 683 (coll. A. W.), male, Jan. 3, 1905.....	87.8	53.5
No. 783 (coll. A. W.), female, March 1, 1905.....	88.5	57.0

The Chickadees from this region are of more interest. Thirteen were secured, ranging in dates from December 5, 1904, to April 27, 1905, and all are referred to *Penthestes carolinensis agilis*. The northern limit of the Texas Chickadee has been given as Stillwell and Fort Reno, Oklahoma (Ridgway, *Birds of North and Middle America*, vol. III, p. 406). These Kansas records, therefore, constitute an important extension in the known range of this form.—ALEX WETMORE, *Biological Survey, Washington, D. C.*

Red Phalaropes Near Corona, California.—Two male Red Phalaropes (*Phalaropus fulicarius*) were shot November 7, 1914, on one of the ponds of the Pomona Recreation Club, which is situated near the Santa Ana River, about eight miles north of Corona, Riverside County, California. The two birds are now numbers 506 and 507 of my collection. It would seem that this is worthy of note since this species usually migrates over the ocean, and this locality where they were taken is a considerable distance inland.—WRIGHT M. PIERCE, Claremont, California.

Some Extreme Nesting Dates.—In comparing Willett's *Birds of the Pacific Slope of Southern California* with some of my own notes, I find the following nesting dates among the latter, that appear somewhat unusual:

Selasphorus allenii. Allen Hummingbird. Catalina Island, March 22, 1910; two eggs, incubation advanced.

Sturnella neglecta. Western Meadowlark. Los Angeles, February 15, 1909; four eggs, fresh.

Hirundo erythrogastra. Barn Swallow. Balboa Beach, June 13, 1908; two eggs, fresh.

Riparia riparia. Bank Swallow. San Pedro, April 26, 1908; five eggs, incubation advanced.

Lanius ludovicianus gambeli. California Shrike. Los Angeles, February 8, 1908; four eggs, fresh.—D. I. SHEPARDSON, Los Angeles, California.

Yellow-billed Loon:—A Correction.—In writing the life history of the little-known species *Gavia adamsi*, I have been puzzled to know what to do with the supposed Colorado record of this species. I have always suspected that the record was based on erroneous identification, as Colorado is so far away from the known range or migration route of this Arctic Loon.

The specimen upon which the record was based was taken by Mr. William G. Smith, near Loveland, Colorado, on May 25, 1885. A letter from Mr. Smith to Major Bendire, giving the details of its capture, is now in my hands and states that the bird was sold to Mr. Manly Hardy of Brewer, Maine, now deceased.

Knowing that the Hardy collection was recently purchased for the Rhode Island Audubon Society and is now in the Park Museum in Providence, I wrote to my friend, Mr. Harry S. Hathaway, of that city, for his opinion as to the identity of the specimen. He very kindly investigated the matter and sent me his report, together with a letter on the subject from Mrs. Fanny Hardy Eckstorm, which strengthened my doubts and practically convinced me that the record was based on an error.

For my own personal satisfaction, I went to Providence and examined the specimen with Mr. Hathaway. It is not a Yellow-billed Loon, but it is a very curious specimen of a Common Loon (*Gavia immer*), and I am not surprised that Mr. Hardy and others who have seen it have been puzzled. Its entire plumage is decidedly worn, and faded to a dull brownish shade. It is a young male in the immature plumage of the first year. Its bill is certainly yellow, the yellowest or lightest colored bill I have ever seen in any young Loon, which probably led to its identification as *Gavia adamsi*; but the size and shape of the bill agrees with *Gavia immer* and not with *G. adamsi*. The culmen measures about 3.20 inches, and the depth of the bill at the base is about .90. Ridgway's *Manual* gives, for *adamsi*, culmen 3.50 to 3.65, and depth 1.00 to 1.20, and for *immer*, culmen 2.75 to 3.50 and depth .90 to 1.05 inches. The bird in question is small, even for *Gavia immer*, notwithstanding the fact that it is a male, and it has a particularly slender bill, even for that species, instead of the large, heavy bill, with the straight culmen so characteristic of *Gavia adamsi*.

It is only fair to Mr. Hardy to say that he was in doubt about the bird and that the record never ought to have stood without verification. I cannot understand why some one who was competent to identify the bird, did not examine the specimen before the record was published, which would have prevented the frequent repetition of an error which can never be wholly rectified. Such errors are far too common and I hope that this one will be corrected in the next edition of the A. O. U. *Check-List*.—A. C. BENT, Taunton, Massachusetts.

A Remarkable Flight of Sparrow Hawks.—While travelling north on the Santa Fe Railway above Albuquerque, New Mexico, along the Rio Grande River, in the late afternoon of September 13, 1914, an enormous flight of Western Sparrow Hawks (*Falco sparverius phalaena*) was passed. Thousands sailed by in a continuous stream, all working leisurely south, often a hundred or more in sight from the car window at one time. Individuals frequently alighted on convenient trees and telegraph poles, and all seemed on the lookout for food. The flight seemed to be confined to the vicinity of the river and its adjacent thickets of rank weeds and willows interspersed with stretches of green meadow and alfalfa.

A very few larger hawks were seen, but whether migrating with the Sparrow Hawks, or not, could not be determined. Of these, a Prairie Falcon, a dark Swainson Hawk, and a male Marsh Hawk were identified.

As no specimens were taken it is probably presuming to state positively that these were the Western variety. Why shouldn't they be Eastern, or even both Eastern and Western, drawn together from a vast expanse of barren territory along the converging tributaries of the Rio Grande River, and held in a concentrated flight by the grasshoppers and mice so abundant in this oasis strip?

Travelling south along the Rio Grande river on the morning of September 15th, two days later, in the vicinity of Rincon, New Mexico, some two hundred miles farther south, not a trace of this flight was left. Or had the birds not yet arrived?—J. EUGENE LAW, *Hollywood, California*.

Black-and-White Warbler at Berkeley, California.—March 18, 1915, a female Black-and-White Warbler (*Mniotilta varia*) was noted in a large live oak tree on the lower part of the University of California campus. When first seen, against a strong light, its colors could not be made out, but its actions resembled those of a creeper. Later it was seen under more favorable conditions. The strikingly contrasted black and white striping on the upper surface and the unmarked under parts (indicative of the female), the zigzag hopping movement along the larger limbs and short circling flights were all then clearly noted. Compared with other warblers occurring on the campus it seems to spend more of its time on the under surface of large limbs. A faint call note was the only sound heard. Mr. A. C. Shelton and Mr. E. P. Rankin were present at the time the bird was seen and we all immediately repaired to the Museum of Vertebrate Zoology and verified the identification by examining skins of this and other species. To my knowledge this is the fifth record of the species for California.—TRACY I. STORER, *Berkeley, California*.

Early Spring Notes from West-Central California.—The following are some data picked up this spring (1915) at odd moments during my regular work along railroad lines.

February 19. On train along south shore of San Pablo Bay from Oakland to Port Costa. Estimated number of ducks seen feeding close to shore, 5920. About 90 per cent of these appeared to be Canvas-backs, the remaining 10 per cent Blue-bills. This estimate did not include the thousands lying out on the bay, but only those close to shore.

March 18. A little east of Altamont, Alameda County. Nest of California Shrike in eucalyptus at deserted farm; placed about seven feet above the ground upon the main trunk, which had been cut off, and between the surrounding aftergrowth; contained six young about one week old.

March 31. Elliot Gravel Pit, near Pleasanton, Alameda County. A nest of the Mourning Dove built on the steeply sloping gravel surface of the steam shovel cut; situation notably exposed; contained two eggs about to hatch. On same day saw a pair of Yellow-headed Blackbirds in vicinity of a railroad barrow-pit filled with water.

April 7. Cayley, near Altamont pass, Alameda County. Young California Horned Larks barely able to fly, indicating an early date of nesting.

April 8. Altamont, Alameda County. Nest of Mourning Dove on the ground, containing two incubated eggs.—L. P. BOLANDER, *Oakland, California*.

THE CONDOR

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Western Ornithology

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Cooper Ornithological Club

J. GRINNELL, Editor, Berkeley, California

HARRY S. SWARTH, Associate Editor

J. EUGENE LAW }
W. LEE CHAMBERS } Business Managers

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EDITORIAL NOTES AND NEWS

The annual Cooper Club roster published in this issue shows a present membership of 6 honorary, 4 life, and 535 active members, considerably more than for any previous year. It is requested that any errors in the roster be promptly reported to one or the other of the Club secretaries.

At least two active ornithologists are directing their attention to Alaska this year. Mr. F. Seymour Hersey, of Taunton, Massachusetts, has left Seattle for St. Michael, on Behring Sea, to collect specimens, and especially to take photographs, during the summer, in the interests of Bent's "Life Histories of North American Birds". Mr. Hersey will thus be working from the same base that Nelson did thirty-five years ago. Mr. George Willett has left California to spend another summer on Forrester Island, southeastern Alaska, where a very great deal doubtless yet remains to be learned concerning the hordes of water birds which resort to that isolated locality for the nesting season. We hope that he succeeds in finding the eggs of the long-sought-for Marbled Murrelet!

Those of us who have the museum instinct well developed are often pained to read in

a collector's narrative that some rare specimen has been thrown away as being "too far gone to skin". There is increasing need for osteological material, and it is a shame that any perfectly good specimens for such purposes should be destroyed. It is a very simple matter to remove the major portion of the soft parts from a dead bird, wrap in the feet and head with a little thread or twine, and hang it up to dry; or else to roll it in dry cornmeal, which will retard decay, and ship it at once to some museum. Of course a tag should be affixed, giving the sex, as ascertained by dissection, exact locality, date, and name of collector. Bodies of skinned birds might well be saved in similar fashion. As previously stated in these columns, it is becoming more and more incumbent upon the collector of birds to justify the privilege he enjoys, by making the greatest possible use of the material he gathers.

On another page of this issue Mr. A. C. Bent does American ornithology an excellent service by correcting an important error in identification, by reason of which error a record of occurrence far beyond the normal range of the species in question has stood in our literature for many years. We can see no reason for attempting to defend the perpetrator of any erroneous record, where such has been made without exhausting every reasonable means of verification. As Mr. Bent says, it is lamentably difficult to eliminate a faulty record from our literature. It is vastly better to make every possible effort toward accurate determination of both the circumstances of capture and the identity of the species before venturing into print. In this day of many museums, and with willing experts whose services may be elicited in making comparisons of specimens, it looks as though we ought to be able to escape such blunders.

It is with the deepest regret that we announce the death of an active Cooper Club man, F. E. Newbury. This took place at his home in San Francisco on March 16, 1915. Mr. Newbury came to California from the East in 1903, and located in San Francisco as an optician, in which profession he was very successful. We learn through Mr. Harry S. Hathaway of Providence, R. I., a long-time friend of Newbury, that the latter was a man of quiet, unassuming manner, who loved his friends, home and family above all else. He was an agreeable companion and a hard worker in the field. He studied birds and collected birds' eggs, chiefly for recreation, and had gathered a not large, but decidedly choice series of personally collected sets.

Harry K. Pomeroy, an active member of the Cooper Ornithological Club died at his home in Kalamazoo, Michigan, on January 27, 1915. Pomeroy was born in Lockport,

New York, April 3, 1865, and moved to Kalamazoo in 1872. His favorite study was ornithology, and his collection of birds, nests, and eggs is one of the best in his State. The many friends who enjoyed the privilege of Pomeroy's acquaintance bear witness to his kindly nature and earnest helpfulness. Although always residing in the East, he was deeply interested in Western ornithology, and followed closely the results of the work of others, as reported in current magazines.

Dr. Barton W. Evermann and Mr. Joseph Mailliard spent a week in April in the Kern Valley district of the extreme southern Sierra Nevada. Their prime object was to learn further details of the manner of occurrence of the remarkably restricted Kern Red-winged Blackbird, lately described by Mr. Mailliard. The trip was a success, and the results will be reported in due time.

COMMUNICATION

BECK AT CAPE HORN

Editor THE CONDOR:

Having rounded the Horn safely in our twelve-ton cutter, and being anchored within fifteen miles of that well-known landmark waiting for one of the ordinary gales to let up, a line to you will pass away a few minutes until the candy boiling on the floor of the cabin on a seventy-eight-cent oil stove bought in San Francisco is pronounced by Mrs. Beck ready for eating. We passed somewhat closer to Cape Horn than do most of the passers-by, going inside the two outer rocks which lie a half mile or so to the southward.

The blue-eyelidded, white-breasted cormorants were nesting on a pinnacle rock to the westward, recalling the murre rookeries of Alaskan islands. Albatrosses and sooty shearwaters sailed high and low about us. Skuas flew by in rapid flight to some distant fishing point, and frequently penguins would show for a brief moment above the choppy sea.

If the captain of the boat had not been so anxious to take me back alive to Punta Arenas, I might have landed and gone up on top of the Horn for a look around; but the uncertainty of the winds and their rapid changing from one point to another, as well as the sudden manner in which they increase most forcefully in strength, prevented. As it was, the nice breeze we had, picked up after dinner into half a gale, and it felt most comfortable to run into a sheltered cove and anchor.

In the last five weeks, three days have passed without rain, snow or hail, and I'm hoping for as many more on the return trip. Some days but a squall or two, and others a continual drizzle, makes the raincoat constantly necessary. Compared with the off-shore ranging of the common California albatross, the fishing here by the common albatross in these southern channels bordered on either side by snow-topped hills is interesting. The island land-bird life is rather barren though, as compared with the Aleutian Islands of Alaska. One misses the ptarmigan, the cheery snowflake and the brightly colored leucosticte, although the latter has a counterpart here in a rarely noticed, black-chinned finch that inhabits rocky hillsides. Sea-birds are plentiful, and I have seen nesting colonies of terns, gulls, shags, penguins, shearwaters, and albatrosses.

Sincerely,

R. H. BECK.

Cape Horn, Chili, January 3, 1915.

PUBLICATIONS REVIEWED

REPORT ON BIRDS COLLECTED AND OBSERVED DURING APRIL, MAY, AND JUNE, 1913, IN THE OKANAGAN VALLEY, FROM OKANAGAN LANDING SOUTH TO OSOYOOS LAKE. By E. M. ANDERSON. (Report of the Provincial Museum of Natural History for the year 1913, Victoria, British Columbia, Jan., 1914, pp. 7-16.)

REPORT OF BIRDS COLLECTED AND OBSERVED DURING SEPTEMBER, 1913, ON ATLIN LAKE, FROM ATLIN TO SOUTH END OF THE LAKE. By F. KERMODE and E. M. ANDERSON. (*Ibid.*, pp. 19-21.)

BIRDS COLLECTED AND OBSERVED IN THE ATLIN DISTRICT, 1914. By E. M. ANDERSON. (Report of the Provincial Museum of Natural History for the year 1914, Victoria, British Columbia, January, 1915, pp. 8-17.)

The lists contained in the above cited papers include what may be accepted as practically complete catalogues of the summer birds of the regions treated. As little or nothing has been published heretofore regarding the birds of the Atlin district and of Okanagan Valley, of extreme northern and extreme southern British Columbia, respectively, these contributions are consequently of importance, and as evident care was taken in the collection and proper identification of specimens, they may be taken as authoritative.

From Okanagan Valley one hundred and twenty-nine specimens are listed; from the

Atlin district, eighty-four summer birds and thirty-five in the September list. Some species were found new to British Columbia, and there are many records of interest as regards distribution. The comments under each species are condensed, including little more than brief statements of the manner of occurrence. On pages 17 and 18 of the 1914 report is a list of errata in the Okanagan paper. These are mostly corrections of names used, in most instances closely related subspecies having been confused.

It seems a pity that papers of such value and of such general interest should be buried in museum reports where they are lost to those most interested. They have evidently escaped the notice of even so thorough and careful a searcher of ornithological literature as is the reviewer of the *Auk*! Also but scant justice is done to either collection or author, for statements must be condensed to the utmost, and many interesting phases of the collections passed over without comment. The exceedingly brief account of the nesting of the Bohemian Waxwing in the Atlin district, where four sets of eggs were found, is but one instance of many, of facts of life history, manner of occurrence, etc., that would bear carefully detailed treatment. In these same annual reports there are included similarly abbreviated lists of mammals, insects, etc., from the Atlin and Okanagan districts.

While the subject matter of these various lists is, as far as it goes, evidently authoritative and a welcome addition to our knowledge of the biota of the regions involved, the editorial treatment of the papers can not be commended. While care has been taken to ascertain the proper names of the species listed, punctuation and general typographical treatment of these names is not uniform, nor do they accord with current usage. Also there are many errors of typography throughout the several papers.—H. S. SWARTH.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

JANUARY.—The regular monthly meeting of the Northern Division was held at the California Museum of Vertebrate Zoology, Berkeley, January 21, 1915, at 8 p. m. President Bryant was in the chair with the following members present: Mesdames Allen, Bryant, Grinnell and Schlisinger, the Misses Andrews, Atsatt, Conger, Dolbear and Wythe, and the Messrs. Bolander, Camp,

Carriger, Dice, Evermann, Grinnell, Joseph Mailliard, McAtee and Storer. Visitors present were: Mr. and Mrs. Newberry, Mrs. Kluger, Miss Dora Lemon, and Mr. F. Martens.

The Northern Division December, 1914, minutes were read and approved and the Southern Division December minutes were read. The following were elected to membership: J. N. Kendall and the seven persons proposed by the Southern Division in November. The following applications for membership were read: J. H. Paul, 1320 East 2d Street South, Salt Lake City, Utah, by A. O. Treganza; Irwin C. Schumacher, Yuba City, and G. F. Sutherland, East Hall, University of California, Berkeley, both proposed by A. L. Barrows, and two received by the Southern Division in December. The resignation of Mr. Charles H. Richardson was accepted.

A written communication from Mr. W. Otto Emerson was received asking that the Club endorse a movement to have ornithology made a required subject in the grammar schools. The matter was laid on the table.

Election of officers resulted as follows: President, Joseph Mailliard; Vice-president, Walter K. Fisher; Secretary, Tracy I. Storer. For the offices of Editor of the *CONDOR* and Business Managers the present incumbents were re-elected, namely, Joseph Grinnell, editor; W. Lee Chambers and J. Eugene Law, business managers.

Tracy I. Storer gave a short demonstration of a new method of photographing freshly killed specimens of animals.

H. C. Bryant briefly summarized the changes in game laws proposed in the California Legislature. Shorter seasons, smaller bag limits, and extending a measure of protection to species not now protected, are the important changes to receive attention.

The Division was fortunate in having Mr. W. L. McAtee of the Bureau of Biological Survey present. Mr. McAtee spoke of the economic work being done by the Survey on birds. A re-examination of the Crow and English Sparrow problems, investigation of disease among ducks on inland bodies of water in the West, studies of the food habits of thrushes, swallows, wrens, thrashers and titmice, also nighthawks and poor-wills, the damage being done to the oyster industry in Washington, the damage done by sap-suckers to forest trees, and the special methods to be used in attracting birds in different parts of the United States, are some of the problems which the economic ornithologists of the Survey have been or are now working upon. A general discus-

sion followed. Adjourned.—TRACY I. STORER, *Secretary*.

FEBRUARY.—The regular monthly meeting of the Northern Division was held at the California Museum of Vertebrate Zoology, Berkeley, February 18, 1915, at 8 p. m. In the absence of both President and Vice-President, Mr. H. C. Bryant presided. The following members were present: Mesdames Bryant and Grinnell, the Misses Andrews, Culver and Dolbear, and the Messrs. Bolander, Carriger, Grinnell, Heinemann, Kendall and Storer. Five visitors were present.

The minutes of the Northern Division January meeting were read and approved and the minutes of the Southern Division Special Meeting read. The first minutes of the Inter-mountain Chapter at Salt Lake City, Utah, were received and read with much interest. J. H. Paul, I. C. Schumacher, and G. F. Sutherland, and two persons proposed by the Southern Division in December were elected to membership. The proposal of Mr. Fred W. Chambers, 701 Walker Bank Building, Salt Lake City, Utah, from Mrs. A. O. Treganza was received.

H. C. Bryant briefly described the progress of game legislation in the present session of the legislature.

Tracy I. Storer read two shore-bird biographies prepared in connection with the work of Grinnell, Bryant and Storer on the game birds of California. The species considered were the Wilson Snipe and Avocet.

L. P. Bolander exhibited a beautiful skin of an adult male American Merganser. Adjourned.—TRACY I. STORER, *Secretary*.

MARCH.—The regular monthly meeting of the Northern Division was held at the California Museum of Vertebrate Zoology, Berkeley, California, March 18, 1915, at 8 p. m. President Joseph Mailliard was in the chair with the following members present: Mesdames Allen and Grinnell, the Misses Andrews, Atsatt, Culver and Dolbear, and the Messrs. Bolander, Bryant, Camp, Carriger, Dice, Evermann, Grinnell, J. C. Johnson, Kendall, Shelton, A. G. Smith, Storer, Trenor and Weed. Five visitors were present.

The minutes of the Northern Division February meeting were read and approved and the Southern Division February minutes read. Mr. Fred W. Chambers was elected to membership. The following applications for membership were received: Mrs. Mary Van E. Ferguson, 5 Panoramic Way, Berkeley, proposed by Mrs. James Allen, and twenty-two persons proposed at the Southern Division February meeting.

Mr. Joseph Grinnell presented the Business Managers report for 1914. The report was received with great interest. Older members commented very favorably upon the excellent progress in business management shown by the figures presented. President Joseph Mailliard outlined the progress of plans for the A. O. U. meeting in San Francisco during May. Dr. B. W. Evermann very kindly offered the use of the rooms of the California Academy of Sciences for Cooper Club meetings in San Francisco.

Mr. A. C. Shelton, Field Naturalist of the University of Oregon, spoke on "Field Work in Oregon", outlining the general biotic divisions of the State and recounting some of the more interesting incidents in his work of the past year. Mating habits of Pileated Woodpeckers were observed, winter specimens of Pine Grosbeak taken, as well as breeding specimens and a nest of the Crossbill. A discussion followed. Adjourned.—TRACY I. STORER, *Secretary*.

SOUTHERN DIVISION

FEBRUARY.—The regular meeting of the Southern Division was held at the Museum of History, Science and Art, Thursday evening, February 25, 1915. President Law was in the chair and the following members in attendance: Mrs. Gertrude Husher, Miss Claire Germain, and Messrs. Barnes, Blain, Brown, Chambers, Colburn, Daggett, Edwards, Fischer, Granville, Hegner, Howell, Holland, Alphonse Jay, Antonin Jay, Jewett, Little, Miller, Morcom, Nokes, Rich, Robertson, Swarth, Wood and Wyman. Visitors present were Mrs. George Wood and Mrs. H. Mullin.

The Southern Division minutes for December, 1914, and for the special meeting of January 22, 1915, were read and approved. No regular meeting was held during January. Northern Division minutes for December, January and February were read, and also the first minutes received, for the February meeting, of the newly formed Inter-Mountain Chapter of Salt Lake City, Utah. New members elected were J. N. Swift, Stockport, Ohio, and W. A. Ford, Umatilla, Oregon. A motion was also passed electing to membership those whose names were approved in the Northern Division meetings of December, January and February. New names were presented as follows: M. P. Skinner, Yellowstone Park, Wyoming; W. S. Richmond, Batavia, N. Y.; H. K. Job, West Haven, Conn.; J. Kittredge, Jr., Missoula, Mont.; G. C. Cantwell, Puyallup, Wash.; H. H. Mitchell, Regina, Saskatchewan, Canada;

H. C. Sprunger, Wickenburg, Arizona; H. W. Brandt, Cleveland, Ohio; all the above proposed by W. Lee Chambers. Edward J. Brown, Los Angeles; Clarence E. Smith, Woody; George Polkinghorn, Los Angeles; M. C. Badger, Santa Paula; proposed by A. E. Colburn. T. C. Stephens, Sioux City, Iowa, and Wm. H. Nevin, Pasadena, proposed by A. B. Howell. L. A. Tope, Clearfield, Iowa, by O. E. Baynard; M. R. Cheesman, Murry, Utah, by A. O. Treganza; T. T. Gillette, Pasadena, by H. A. Edwards; H. S. King, Gardena, by A. Cookman; J. A. Weber, Palisades Park, N. Y., by L. E. Wyman; W. A. Goelitz, Ravinia, Ill., by W. A. Strong; E. S. Coombs, Boston, Mass., by D. I. Shepardson; E. M. Anderson, Victoria, British Columbia, Canada, by H. S. Swarth. The resignations of Miss Edith S. Waterman, Alameda, and Robert B. Rockwell, Denver, Colorado, were read and accepted. The annual financial report of the business managers, covering the year 1914, was read and accepted. This ended the business before the meeting.

Mr. R. Magoon Barnes talked at some length, and most entertainingly, on certain phases of the work of keeping wild ducks, geese and swans in captivity, in which he is an acknowledged authority. His comments upon the Trumpeter Swan in particular brought home to those present many facts regarding this rare and little known bird which most of us either did not know or imperfectly realized. Mr. Fred Granville, recently returned from a trip to northern Alaska and Siberia, had on exhibition three skins of the Ross Rosy Gull (*Rhodostethia rosea*), adults and immatures, and two adults of the Spoon-billed Sandpiper (*Eury-norhynchus pygmeus*), together with photographs of other species of birds, nests and eggs. Dr. L. H. Miller exhibited an interesting series of bird photographs, mostly of exotic species; and Mr. Hegner showed pictures of winter scenes in some of the more remote parts of the San Gabriel Mountains. Mr. J. E. Law displayed a selection of specimens exhibiting most of the plumages of the Pacific species of Murres, Auklets, and Murrelets. Adjourned.—H. S. SWARTH, Secretary.

MARCH.—The regular meeting of the Southern Division was held at the Museum of History, Science and Art, Thursday evening, March 25, 1915. President Law was in the chair and the following members were present: Mrs. Gertrude Husher and Messrs. Blain, Brown, Daggett, Holland, Jewett, Little, Morcom, Nokes, Rich, Snyder,

Swarth, Willett and Wyman. Mrs. Law was a visitor. The minutes of the February meeting were read and approved, followed by the reading of the March minutes of the Northern Division and of the Inter-Mountain Chapter.

The following new members were elected: L. A. Tope, T. C. Stephens, Clarence E. Smith, H. C. Sprunger, W. S. Richmond, M. P. Skinner, Ernest M. Anderson, Edward S. Coombs, Walter A. Goelitz, J. A. Weber, Harold L. King, Thurlow T. Gillette, M. R. Cheesman, Wm. H. Nevin, M. C. Badger, George Polkinghorn, H. W. Brandt, H. H. Mitchell, George G. Cantwell, Joseph Kittredge, Jr., Herbert K. Job, and Edward J. Brown.

New names were presented as follows: Miss Ellen G. Scott, Tropico, Calif., and Mrs. Katherine S. Wakeley, Los Angeles, both presented by A. E. Colburn; J. Frank Wilson, Monrovia, Calif., and Charles O. Trowbridge, Farmingham Center, Mass., by W. Lee Chambers.

A communication was read, received from Mr. A. B. Howell and dealing with the problem of bird banding. L. E. Wyman was appointed to take charge of the matter and see what could be done toward arousing the interest of Club members in this work. Adjourned.—H. S. SWARTH, Secretary.

DIRECTORY OF MEMBERS OF THE COOPER ORNITHOLOGICAL CLUB

Revised to May 1, 1915

(Residence in California unless otherwise stated. Year following address indicates date of election. Star preceding name indicates life member.)

HONORARY MEMBERS

Allen, Dr. J. A., American Museum of Natural History, New York, N. Y. 1910.
Beal, Prof. F. E. L., Biological Survey, U. S. Dept. Agriculture, Washington, D. C. 1910.
Belding, Lyman, Stockton. 1896.
Merriam, Dr. C. Hart, 1919 16th St., Washington, D. C. 1909.
Ridgway, Robert, 3306 New Hampshire Ave., N. W., Washington, D. C. 1905.
Stephens, Frank, 3746 Park Blvd., San Diego. 1912.

ACTIVE MEMBERS

Adam, Frederick, 603 Vassar St., Tropico. 1914.
Adams, Ernest, Carlotta, Humboldt Co. 1896.

- Alexander, Annie M., 92 Seaview Ave., Piedmont. 1908.
Alkire, W. H., 1756 Edgemont St., Hollywood. 1914.
Allen, Amelia S., Mosswood Road, Berkeley. 1913.
Allen, Arthur A., McGraw Hall, Ithaca, N. Y. 1911.
Anderson, Ernest M., Provincial Museum, Victoria, B. C., Canada. 1915.
Anderson, Malcolm P., Menlo Park. 1901.
Andrews, Edna A., 2233 Ellsworth St., Berkeley. 1914.
Appleton, J. S., Simi, Ventura Co. 1901.
Armstrong, Edward E., 207 N. Michigan Ave., Chicago, Ill. 1914.
Arnold, E., Freight Claim Agt., Grand Trunk Ry., Montreal, Quebec, Canada. 1909.
Arnold, Ralph, 917 Union Oil Bldg., Los Angeles. 1893.
Arnold, W. W., 504 N. Nevada Ave., Colorado Springs, Colo. 1911.
Atkinson, W. L., 35 Hawthorne Way, San Jose. 1901.
Atsatt, Sarah R., 345 S. Serrano Ave., Los Angeles. 1911.
Averill, E. F., Pendleton, Oregon. 1914.
Bade, Wm. F., 2616 College Ave., Berkeley. 1903.
Badger, M. C., Santa Paula. 1915.
Bagley, J., Box 46, Eureka. 1913.
Bailey, Bernard, R. D. 1, Elk River, Minn. 1911.
Bailey, Florence M., 1834 Kalorama Road, Washington, D. C. 1910.
Bailey, Henry F., 94 Pacific Ave., Santa Cruz. 1914.
Bailey, H. H., Box 154, Newport News, Va. 1903.
Bailey, Vernon, 1834 Kalorama Road, Washington, D. C. 1904.
Bales, Dr. B. R., 151 West Main St., Circleville, Ohio. 1906.
Bangs, Outram, Museum of Comparative Zoology, Cambridge, Mass. 1910.
Barbour, Rev. Robert, Y. M. C. A., Montclair, N. J. 1911.
Barker, Fred, Parkers Prairie, Minn. 1914.
Barnes, Claude T., 359 10th Ave., Salt Lake City, Utah. 1915.
Barnes, R. Magoon, Lacon, Ill. 1908.
Barrows, Albert L., 1430 Arch St., Berkeley. 1912.
Barrows, Prof. Walter B., Box 183, East Lansing, Mich. 1909.
Batchelder, Chas. F., 7 Kirkland St., Cambridge, Mass. 1910.
Baynard, Oscar E., Clearwater, Fla. 1911.
Beck, Rollo H., R. D. 21, San Jose. 1894.
Bell, W. B., Agricultural College, N. D. 1912.
Bennett, R. H., Room 409, 444 Market St., San Francisco. 1909.
Bent, A. C., Taunton, Mass. 1909.
Bicknell, Mrs. F. T., 319 S. Normandie Ave., Los Angeles. 1913.
Bigelow, Homer L., Old Orchard Road, Chestnut Hill, Mass. 1910.
Bishop, Dr. Louis B., 356 Orange St., New Haven, Conn. 1904.
Blain, Merrill W., 1026 N. Coronado St., Los Angeles. 1909.
Blayney, Nita A., 920 O St., Fresno. 1911.
Bliss, J. G., 2148 B, Clinton Ave., Alameda. 1908.
Boeing, W. E., 1100 Hoge Bldg., Seattle, Wash. 1914.
Bohlman, Herman T., 202 Occident St., Portland, Oregon. 1903.
Bolander, L. P., 2517 21st Ave., Oakland. 1907.
Bowdish, B. S., Demarest, N. J. 1910.
Bowditch, Charlotte, 2227 Upper Garden St., Santa Barbara. 1914.
Bowles, J. H., The Woodstock, Tacoma, Wash. 1903.
Boyer, Thos., Continental National Bank, Salt Lake City, Utah. 1915.
*Bradbury, W. C., 1440 Race St., Denver, Colo. 1913.
Braislin, Wm. C., M. D., 556 Washington Ave., Brooklyn, N. Y. 1910.
Brandt, H. W., 2025 E. 88th St., Cleveland, Ohio. 1914.
Brant, C. A., El Tovar, Grand Canyon, Arizona. 1914.
Brewster, William, 145 Brattle St., Cambridge, Mass. 1904.
Brooks, Allan, Okanagan Landing, B. C., Canada. 1906.
Brooks, L., Box 338, New Bedford, Mass. 1913.
Brown, D. E., Room 11, Federal Bldg., Tacoma, Wash. 1909.
Brown, Edward J., 1733 Fourth Ave., Los Angeles. 1915.
Brown, Mrs. Herbert, 233 N. Court St., Tucson, Arizona. 1914.
Brown, Ronald K., 320 Broadway, New York, N. Y. 1914.
Brown, Wm. J., 250 Oliver Ave., Westmount, Quebec, Canada. 1911.
Brown, W. W., Jr., 543 E. Ocean Ave., Long Beach. 1909.
Bryant, Mrs. Amy M., 2533 Hill Court, Berkeley. 1914.
Bryant, Harold C., Museum of Vertebrate Zoology, University of California, Berkeley. 1910.
Buckland, Hon. James, Royal Colonial Inst., Northumberland Ave., London, England. 1912.

- Burnett, W. L., Box 691, Fort Collins, Colo. 1910.
- Burnham, Dr. Clark, Bushnell Place, Berkeley. 1907.
- Burnham, Mrs. Clark, Bushnell Place, Berkeley. 1907.
- Burns, Frank L., Berwyn, Pa. 1909.
- Burtch, Verdi, Branchport, N. Y. 1910.
- Butler, Mrs. Edward Gay, Annefield, Berryville, Clarke Co., Va. 1914.
- Buturlin, Sergius A., Wesenberg, Esthonia, Russia. 1909.
- Caduc, Eugene E., 512 Massachusetts Ave., Boston, Mass. 1911.
- Cameron, E. S., Marsh, Montana. 1914.
- Camp, Charles L., 2334 Durant Ave., Berkeley. 1909.
- Cantwell, George G., Puyallup, Washington. 1915.
- Carpenter, Nelson K., Box 127, Escondido. 1901.
- Carriger, Henry W., 5185 Trask Ave., Oakland. 1895.
- Carriker, M. A., Cincinnati Coffee Co., Santa Marta, Colombia, South America. 1911.
- Case, Rev. B. F., Tolland, Conn. 1913.
- Case, C. M., 7 Holcomb St., Hartford, Conn. 1911.
- Chamberlain, C. W., 36 Lincoln St., Boston, Mass. 1912.
- Chamberlain, W. J., 429 N. 12th St., Corvallis, Oregon. 1907.
- Chambers, Fred W., 701 Walker Bank Bldg., Salt Lake City, Utah. 1915.
- Chambers, W. Lee, Eagle Rock. 1897.
- Chapman, Frank M., American Museum of Natural History, New York, N. Y. 1903.
- Cheesman, M. R., R. D. 3, Box 61, Murry, Utah. 1915.
- *Childs, John Lewis, Floral Park, N. Y. 1904.
- Clark, Josiah H., 238 Broadway, Paterson, N. J. 1910.
- Clay, C. Irvin, Box 353, Eureka. 1910.
- Clifton, H. T., 509 E. Walnut St., Pasadena. 1904.
- Coale, Henry K., Highland Park, Ill. 1907.
- Coffin, Sherwood, 35 Second St., San Francisco. 1911.
- Coggins, Herbert L., 2929 Piedmont Ave., Berkeley. 1910.
- Cohen, Donald A., Alameda. 1894.
- Colburn, A. E., 806 S. Broadway, Los Angeles. 1905.
- Commons, Mrs. Marie A., 608 Chamber of Commerce, Minneapolis, Minn. 1914.
- Conger, Dorothy, 2425 Oregon St., Berkeley. 1914.
- Cooke, Wells W., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1911.
- Cookman, Alfred, Moneta. 1912.
- Coombs, Edward S., 243 Franklin St., Boston, Mass. 1915.
- Cooper, James S., 827 54th St., Oakland. 1903.
- Crane, Ada Ethel, 19 Ross St., San Rafael. 1914.
- Craven, Jesse T., 811 Roosevelt Ave., Detroit, Mich. 1909.
- Crosby, Maunsell S., Grasmere Farms, Rhinebeck, N. Y. 1911.
- Culp, Charles H., Pacific Grove. 1914.
- Culver, Susan B., 2908 Channing Way, Berkeley. 1914.
- Currier, Ed. S., P. O. Drawer 21, St. Johns, Multnomah Co., Oregon. 1904.
- Daggett, Frank S., 2833 Menlo Ave., Los Angeles. 1895.
- Darlington, E. J., 2301 Monroe St., Wilmington, Delaware. 1911.
- Davenport, Mrs. Elizabeth B., Northern Ave., Brattleboro, Vermont. 1911.
- Davidson, Cassie A., 1523 Spring St., Berkeley. 1915.
- Davis, Evan, 339 E. Palmyra Ave., Orange. 1894.
- Davis, J. M., 811 O St., Eureka. 1908.
- Dawson, W. Leon, R. D. 3, Box 83, Santa Barbara. 1906.
- Day, Chester S., 15 Chilton Road, West Roxbury, Mass. 1910.
- Dean, W. F., Three Rivers. 1901.
- Deane, Ruthven, 112 W. Adams St., Chicago, Ill. 1904.
- Deane, Walter, 29 Brewster St., Cambridge, Mass. 1907.
- Dear, Lionel S., Box 456, Fort William, Ontario, Canada. 1914.
- Dearborn, Ned, Linden, Maryland. 1909.
- Decker, F. R., Box 201, Prosser, Washington. 1913.
- Dial, Dr. E. A., 1837 N. Wilton Place, Los Angeles. 1913.
- Dice, Lee R., Museum of Vertebrate Zoology, University of California, Berkeley. 1914.
- Dickey, Donald R., Box 701, Pasadena. 1910.
- Dickey, Samuel S., 31 S. West St., Waynesburg, Pa. 1911.
- Dille, F. M., 2927 W. 28th Ave., Denver, Colo. 1903.
- Dixon, Joseph, Escondido. 1904.
- Dolbear, Katherine E., Berkeley Inn, Berkeley. 1915.
- Douglas, J. S., Bin 7, Bakersfield. 1911.
- DuBois, Alexander Dawes, Dutton, Montana. 1911.
- Dunbar, W. Linfred, care of Remington Arms Co., Bridgeport, Conn. 1911.
- Duprey, H. F., Dixon. 1907.
- Durfee, Owen, Box 125, Fall River, Mass. 1911.

- Dutcher, Wm., 990 Central Ave., Plainfield, N. J. 1905.
- Dutton, P. C., 26 Litchfield Road, Stone Staffs, England. 1913.
- Dwight, Dr. Jonathan, Jr., 134 W. 71st St., New York, N. Y. 1904.
- Earle, Eleanor P., Palma Sola, Manatee Co., Florida. 1911.
- Eastgate, Alf., Tohla, N. D. 1913.
- Eastman, Lieut. F. B., Plattsburg Barracks, New York. 1904.
- Edson, J. M., Marietta Road, Bellingham, Wash. 1911.
- Edwards, H. Arden, R. D. 1, Box 254, Los Angeles. 1913.
- Eggleston, J. W., Occidental College, Los Angeles. 1913.
- Emmons, R. A., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1914.
- Esterly, C. O., Occidental College, Los Angeles. 1908.
- Everett, E. E., Ventura. 1913.
- Evermann, Barton W., California Academy of Sciences, San Francisco. 1911.
- Fargo, Mrs. Minerva J., 1632 N. Kingsley Drive, Los Angeles. 1914.
- Fawcett, F. H., Narrows, Harney Co., Oregon. 1912.
- Ferguson, Mrs. Mary Van E., 5 Panoramic Way, Berkeley. 1915.
- Finley, Wm. L., 651 E. Madison St., Portland, Oregon. 1900.
- Fischer, E. J., 525 W. 57th St., Los Angeles. 1910.
- Fisher, Dr. A. K., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1904.
- Fisher, Elizabeth W., 2222 Spruce St., Philadelphia, Pa. 1910.
- Fisher, Walter K., 1525 Waverly St., Palo Alto. 1900.
- Fitzpatrick, T. J., Bethany, Nebraska. 1913.
- Flanagan, John H., 153 Power St., Providence, R. I. 1904.
- Fleming, J. H., 267 Rusholme Road, Toronto, Ontario, Canada. 1910.
- Flint, Wm. R., 160 S. Madison Ave., Pasadena. 1912.
- Ford, W. A., Umatilla, Oregon. 1915.
- Forrest, E. R., 357 N. Main St., Washington, Pa. 1910.
- Fortiner, J. C., Brawley. 1910.
- Fowler, Frederick H., 221 Kingsley Ave., Palo Alto. 1901.
- Fox, Mrs. L. L., Los Olivos, Santa Barbara Co. 1911.
- Frazier, J. F., Independence, Mo. 1911.
- Fuertes, Louis A., Cornell Heights, Ithaca, N. Y. 1904.
- Gage, Mabel C., Worcester, Mass. 1913.
- Gane, Henry S., Santa Barbara. 1903.
- Gardner, Leon L., Claremont. 1911.
- Gault, Benj. T., Glen Ellyn, Ill. 1905.
- Gay, Harold S., 200 S. Wilson Ave., Alhambra. 1901.
- Gay, Melvin R., 1495 W. Adams St., Los Angeles. 1914.
- Germain, Clare, 3906 W. First St., Los Angeles. 1915.
- Gillette, Thurlow T., 982 Worcester St., Pasadena. 1915.
- Gilman, M. French, Sacaton, Arizona. 1901.
- Goelitz, Walter A., 1622 Judson Ave., Ravinia, Ill. 1915.
- Goethe, C. M., 2615 K St., Sacramento. 1915.
- Goldman, E. A., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1901.
- Goldman, Luther J., 2418 Prince St., Berkeley. 1902.
- Goodcell, Mrs. Marion L., 864 D St., San Bernardino. 1914.
- Goodwin, Rev. S. H., Box 284, Provo, Utah. 1910.
- Gould, Jos. E., 5 Clifton St., Norfolk, Va. 1909.
- Grant, U. S., 4th, 43 Westmorley Court, Cambridge, Mass. 1909.
- Granville, Fred, 424 North Rosemont Ave., Los Angeles. 1911.
- Grey, Henry, R. D. 2, Box 154 A, San Diego. 1901.
- Grinnell, George Bird, 238 E. 15th St., New York, N. Y. 1914.
- Grinnell, Mrs. Hilda Wood, 2543 Durant Ave., Berkeley. 1912.
- Grinnell, Joseph, Museum of Vertebrate Zoology, University of California, Berkeley. 1894.
- Guion, Geo. Seth, Napoleonville, La. 1911.
- Gunn, Amy E., Mill Valley. 1914.
- Halladay, Daniel S., 1609 N. Main St., Santa Ana. 1910.
- Hanford, Forrest, Y. M. C. A. Bldg., Oakland. 1912.
- Hann, H. H., Parkdale, Oregon. 1909.
- Hanna, Wilson C., 1000 Pennsylvania Ave., Colton.
- Haring, Mrs. C. M., 2801 Russell St., Berkeley. 1915.
- Harmon, Mrs. Frances M., 2115 Estrella Ave., Los Angeles. 1912.
- Harris, Harry, Cashier, Post Office, Kansas City, Mo. 1914.
- Hathaway, Harry S., Box 1466, Providence, R. I. 1912.
- Hazard, R. G., Peace Dale, R. I. 1909.
- Head, Miss Anna, 2730 Belrose Ave., Berkeley. 1912.

- Hegner, Carl D., 810 Avaco St., Los Angeles. 1914.
- Heinemann, Oluf J., 1664 Grove St., San Francisco. 1908.
- Heller, Edmund, U. S. National Museum, Washington, D. C. 1894.
- Helme, Arthur H., Miller Place, Suffolk Co., N. Y. 1911.
- Henderson, Junius, Box 398, Boulder, Colo. 1909.
- Henshaw, Judge F. W., Wells Fargo Bldg., San Francisco. 1915.
- Henshaw, H. W., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1909.
- Hersey, F. Seymour, 6 Maple Ave., Taunton, Mass. 1915.
- Hersey, L. J., Wray, Colo. 1909.
- Hodge, C. F., University of Oregon, Eugene, Oregon. 1914.
- Holland, Harold M., Box 1851, Los Angeles. 1901.
- Holman, F. C., 558 Lincoln Ave., Palo Alto. 1914.
- Hoover, Theodore J., 1 London Wall, London, E. C., England. 1898.
- Horsfall, R. Bruce, 1457 E. 18th St., Portland, Oregon. 1914.
- Howard, O. W., Box 484, Los Angeles. 1895.
- *Howell, Alfred B., Covina. 1908.
- Howell, B. F., Jr., 6 North West College, Princeton, N. J. 1909.
- Howes, Paul G., Stamford, Conn. 1910.
- Howsley, L. B., Culver, Oregon. 1909.
- Hubbard, Samuel, Jr., 244 Montecito Ave., Oakland. 1912.
- Hubbs, Carl L., Stanford University. 1910.
- Huber, Wharton, Gwynedd Valley, Pa. 1915.
- Huey, Lawrence, 32nd St. & Clay Ave., San Diego. 1909.
- Hunt, E. B., 4318 14th St., N. W., Washington, D. C. 1914.
- Hunter, J. S., Union Hotel, San Mateo. 1903.
- Husher, Mrs. Gertrude H., 1495 W. Adams St., Los Angeles. 1913.
- Illingsworth, J. F., College of Hawaii, Honolulu, H. T. 1896.
- Ingersoll, A. M., 908 F St., San Diego. 1895.
- Irving, F. N., care of Southern Express Co., Columbia, S. C. 1910.
- Isham, C. Bradley, 27 W. 67th St., New York, N. Y. 1909.
- Jackson, Thos. H., 304 N. Franklin St., West Chester, Pa. 1911.
- Jacobs, J. Warren, 404 S. Washington St., Waynesburg, Pa. 1909.
- Jay, Alphonse, 1622 Pennsylvania Ave., Los Angeles. 1901.
- Jay, Antonin, 1622 Pennsylvania Ave., Los Angeles. 1901.
- Jenkins, Ida G., 30 Dearborn St., Roxbury, Mass. 1914.
- Jessee, Dr. R. L., Philo, Ill. 1909.
- Jewett, R. D., 1238 S. Serrano St., Los Angeles. 1912.
- Jewett, Stanley G., 582 Bidwell Ave., Portland, Oregon. 1909.
- Job, Herbert K., 291 Main St., West Haven, Conn. 1915.
- Johnson, Frank E., 16 Amackassin Terrace, Yonkers, N. Y. 1911.
- Johnson, John C., Room 421, Y. M. C. A., Berkeley. 1914.
- Johnson, Myrtle E., National City. 1908.
- Jonas, Coloman, 1023 Broadway, Denver, Colo. 1910.
- Jones, Prof. Lynds, Museum of Oberlin College, Oberlin, Ohio. 1911.
- Jordan, A. H. B., Everett, Washington. 1911.
- Jordan, Dr. David Starr, Stanford University. 1902.
- Judson, W. B., 826 Washington Bldg., Los Angeles. 1894.
- Julien, Lillian M., Yreka, Siskiyou Co. 1901.
- Kaeding, Geo. L., Battle Mountain, Nevada. 1903.
- Kellogg, Louise, Box 371, Suisun. 1911.
- Kellogg, Prof. Vernon L., Stanford University. 1901.
- Kendall, J. N., Botany Bldg., University of California, Berkeley. 1915.
- Kennard, Frederic H., Dudley Road, Newton Centre, Mass. 1911.
- Kennedy, C. H., 549 Cowper St., Palo Alto. 1912.
- Kermode, F., Provincial Museum, Victoria, British Columbia, Canada. 1911.
- Kessing, Lawrence R., 1430 Santa Clara Ave., Alameda. 1899.
- Keyes, Prof. Chas. R., Mt. Vernon, Iowa. 1900.
- Kimball, H. H., Seal Beach. 1909.
- King, Harold L., Gardena. 1915.
- King, Hazel, 1898 Broadway, San Francisco. 1914.
- Kittredge, Joseph, Jr., U. S. Forest Service, Missoula, Montana. 1915.
- Knickerbocker, Chas. K., 445 Sacramento Ave., Carpenter Station, Chicago. 1905.
- Knowlton, Dr. F. H., U. S. National Museum, Washington, D. C. 1910.
- Kofoid, Prof. C. A., 2616 Etna St., Berkeley. 1909.
- Kohler, Louis S., 98 Watsessing Ave., Bloomfield, N. J. 1909.
- Kretzman, Prof. P. E., 1230 St. Anthony Ave., Concordia College, St. Paul, Minn. 1914.
- Kuser, John D., Bernardsville, N. J. 1912.
- Labarthe, Jules, Thompson, Nevada. 1914.

- Lamb, Chester C., 549 W. 43rd Place, Los Angeles. 1899.
- Lancashire, Mrs. J. H., Manchester, Mass. 1911.
- Lane, Geo. W., Morgan Hill. 1914.
- Lastreto, C. B., 260 California St., San Francisco. 1913.
- Law, J. Eugene, Hollywood. 1900.
- Layne, J. Gregg, 232 S. Spring St., Los Angeles. 1912.
- LeBris, Louise, 2569 Clay St., San Francisco. 1914.
- Leland, H. J., Court House, Los Angeles. 1897.
- Letchworth, Pierre E., Covina. 1912.
- Lewis, L. Alva, 809 Yeon Bldg., Portland, Oregon. 1912.
- Libby, Gretchen L., 1331 Santa Barbara St., Santa Barbara. 1911.
- Ligon, J. Stokley, Chloride, New Mexico. 1914.
- Lindsay, D. Moore, 808 Boston Bldg., Salt Lake City, Utah. 1915.
- Lings, G. H., 208 Piermont Ave., Nyack, N. Y. 1913.
- Linton, C. B., 125 W. Ocean Ave., Long Beach. 1906.
- Litsey, John B., 1722 Alston Ave., Fort Worth, Texas. 1911.
- Little, Etta V., 413 E. Hadley St., Whittier. 1914.
- Little, Luther, 1625 W. Adams St., Los Angeles. 1914.
- Littlejohn, Chase, Redwood City. 1901.
- Loomis, Leverett M., California Academy of Sciences, San Francisco. 1902.
- Lord, Frank H., 726 Schrader St., San Francisco. 1914.
- Loring, J. Alden, Owego, Toga Co., N. Y. 1914.
- Love, Chas. A., 3353 22nd St., San Francisco. 1901.
- Love, Guy, R. D. 5, Oberlin, Kansas. 1913.
- Lueddemann, Frieda, R. D. 29, Los Gatos. 1914.
- Luther, Clarence H., 8 McIlroy Bldg., Fayetteville, Ark. 1909.
- MacDonald, James A., Lathrop. 1914.
- MacKay, Minnette, 670 King St., Santa Rosa. 1914.
- Magée, William A., R. D., Box 433, Fruitvale, Oakland. 1912.
- Mailliard, Ernest C., 1815 Vallejo St., San Francisco. 1909.
- Mailliard, John W., 300 Front St., San Francisco. 1894.
- Mailliard, Joseph, 1815 Vallejo St., San Francisco. 1895.
- Marshall, Dr. Benj. M., 2036 D St., Eureka. 1913.
- Martin, John W., 339 N. First St., San Jose. 1907.
- Martin, Luke B., Clearwater, Florida. 1914.
- Massey, Herbert, Ivy Lea, Burnage, Didsbury, Manchester, England. 1909.
- Mattern, Edwin S., 1042 Walnut St., Allentown, Pa. 1914.
- McAtee, W. L., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1907.
- McGregor, R. C., Bureau of Science, Manila, P. I. 1893.
- McLain, R. B., Market and 12th St., Wheeling, W. Va. 1897.
- Mearns, Lieut. Col. Edgar A., U. S. National Museum, Washington, D. C. 1905.
- Meeker, Jesse C. A., 51 Washington Ave., Danbury, Conn. 1907.
- Meister, H. D., Wauseon, Ohio. 1909.
- Merrill, E. W., Sitka, Alaska. 1912.
- Mershon, W. B., Saginaw, Michigan. 1911.
- Meyer, Heloise, Overlee, Lenox, Mass. 1914.
- Miller, Mrs. E. C. T., 3738 Euclid Ave., Cleveland, Ohio. 1914.
- Miller, Loye Holmes, State Normal School, Los Angeles. 1905.
- Miller, Mrs. Olive Thorne, 5928 Hayes Ave., Los Angeles. 1911.
- Miller, W. DeWitt, American Museum of Natural History, New York, N. Y. 1909.
- Mills, Enos A., Longs Peak, Estes Park, Colo. 1914.
- Mills, Dr. Herbert R., State Board of Health, Tampa, Florida. 1914.
- Miner, Dr. H. N., Colfax, Placer Co. 1903.
- Mitchell, H. H., 2337 Smith St., Regina, Saskatchewan, Canada. 1915.
- Mitchell, Dr. Walton I., 603 Beacon Bldg., Wichita, Kansas. 1909.
- Moore, Chas. S., Box 222, San Diego. 1913.
- Moore, Robert T., 46 Mansion Ave., Haddonfield, N. J. 1911.
- Moran, R. B., 2221 Ward St., Berkeley. 1897.
- Morcom, G. Frean, Box 175, Huntington Beach. 1904.
- More, R. L., Vernon, Texas. 1911.
- Muller, Carl, Marysville. 1911.
- Munk, Dr. J. A., 747 Alvarado St., Los Angeles. 1909.
- Munro, J. A., Okanagan Landing, British Columbia, Canada. 1914.
- Murie, O. J., 219 7th Ave., S., Moorhead, Minn. 1913.
- Myers, Mrs. H. W., 306 Ave. 66, Los Angeles. 1912.
- Nelson, E. W., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1904.
- Nevin, W. H., Pasadena. 1915.
- Nichols, J. T., American Museum of Natural History, New York, N. Y. 1909.

- Nicholson, Donald J., Orlando, Florida. 1911.
 Noack, H. R., 309 Perry St., Oakland. 1901.
 Nokes, Irwin D., 820 Marsh-Strong Bldg., Los Angeles. 1914.
 Norris, Joseph P., Jr., 2122 Pine St., Philadelphia, Pa. 1911.
 Norris, Roy, 725 N. 10th St., Richmond, Indiana. 1911.
 Oberholser, Harry C., 1444 Fairmont St., Washington, D. C. 1904.
 Ohl, H. C., 76 Third St., San Francisco. 1913.
 Ohlendorf, Dr. W. C., 1922 Blue Island Ave., Chicago, Ill. 1910.
 Osgood, Wilfred H., Field Museum of Natural History, Chicago, Ill. 1893.
 Osterhaut, George E., Windsor, Colo. 1915.
 Overington, R. Bruce, Laurel, Maryland. 1915.
 Owen, Virgil W., 1241 Vine St., Hollywood. 1896.
 Palmer, Elizabeth Day, 1741 Harvard Blvd., Los Angeles. 1909.
 Palmer, R. H., Pocatello, Idaho. 1915.
 Palmer, Dr. T. S., 1939 Biltmore St., N. W., Washington, D. C. 1903.
 Parker, Edwin S., 356 Broadway, Santa Cruz. 1913.
 Parker, Herbert, South Lancaster, Mass. 1911.
 Paul, J. H., 1320 E. Second, South, Salt Lake City, Utah. 1915.
 Paul, Lucius H., 19 Aurora St., Rochester, N. Y. 1911.
 Peabody, Rev. P. B., Blue Rapids, Kansas. 1904.
 Pearson, T. Gilbert, 2257 Loving Place, New York, N. Y. 1910.
 Peck, Morton E., 244 N. 12th St., Salem, Oregon. 1909.
 Pemberton, J. R., 71 Clarendon Ave., San Francisco. 1900.
 Peyton, Lawrence, Sespe, Ventura Co. 1909.
 Peyton, Sidney B., Sespe, Ventura Co. 1913.
 Phelps, Frank M., 212 Fourth St., Elyria, Ohio. 1912.
 Philipp, Philip Bernard, 220 Broadway, New York, N. Y. 1911.
 Phillips, Charles L., 5 W. Weir St., Taunton, Mass. 1915.
 Phillips, Don C., 49 N. Main St., Napa. 1912.
 Phillips, John C., Knobfields, Wenham, Mass. 1911.
 Pierce, Wright M., Box 116, Claremont. 1902.
 Pierpont, Philip, Nordhoff. 1913.
 Pilsbury, Frank O., 90 Main St., Walpole, Mass. 1911.
 Pleasants, Mrs. J. E., R. D. 3, Orange. 1900.
 Polkinghorn, George, 2651 Kenwood Ave., Los Angeles. 1915.
 Pope, E. F., Colmesneil, Texas. 1913.
 Powell, Helen, 2703 Dwight Way, Berkeley. 1914.
 Price, A. E., Grant Park, Ill. 1905.
 Radir, Paul L., 335 W. 27th St., Los Angeles. 1913.
 Randolph, Flora A., 2962 Derby St., Berkeley. 1907.
 Rankin, Edward P., care of U. S. S. Albacross, Sausalito. 1913.
 Rathbun, S. F., 217 14th Ave., N., Seattle, Washington. 1904.
 Ray, Milton S., 220 Market St., San Francisco. 1899.
 Redington, A. P., Box 66, Santa Barbara. 1897.
 Renick, Frank H., 1424 Belmont Ave., Seattle, Washington. 1912.
 Reynolds, L. R., care of Railroad Commission, 833 Market St., San Francisco. 1913.
 Rich, Guy C., M. D., 1820 El Cerrito Place, Hollywood. 1911.
 Richards, E. B., 412 Kate Hayes St., Box 805, Grass Valley, Nevada Co. 1909.
 Richards, Harriet E., 36 Longwood Ave., Brooklyn, Mass. 1914.
 Richards, Dr. T. W., care of Bureau of Medicine and Surgery, Navy Dept., Washington, D. C. 1908.
 Richey, J. Howard, 261 W. Dakota St., Pasadena. 1914.
 Richmond, Dr. Chas. W., U. S. National Museum, Washington, D. C. 1904.
 Richmond, W. L., Batavia, N. Y. 1915.
 Riley, J. H., U. S. National Museum, Washington, D. C. 1909.
 Ritter, Prof. W. E., La Jolla, San Diego Co. 1901.
 Roberts, Dr. T. S., 1603 4th Ave., Minneapolis, Minn. 1909.
 Robertson, Howard, City Attorney's Office, Hosfield Bldg., Los Angeles. 1896.
 Robertson, John McB., care of Jorgensen Contract, Waysahu, Oahu, H. T. 1913.
 Rogers, E. H., 2607 Hearst Ave., Berkeley. 1914.
 Rossignol, Gilbert R., 2116 Bull St., Savannah, Ga. 1909.
 Rowley, John, 42 Plaza Drive, Berkeley. 1909.
 Rust, Henry J., Box 683, Coeur d'Alene, Idaho. 1911.
 Sage, John H., Portland, Conn. 1910.
 Sampson, Walter B., 814 Kohl Bldg., San Francisco. 1894.
 Sands, E. V., Tombstone, Ariz. 1914.
 Sanford, Dr. Leonard C., 347 Temple St., New Haven, Conn. 1915.
 Sanford, W. H., 17 W. Magnolia St., Stockton. 1915.
 Saunders, Aretas A., Box 65, West Haven, Conn. 1909.

- Saunders, W. E., London, Ontario, Canada. 1910.
- Schaeffle, Ernest, 734 Mills Bldg., San Francisco. 1914.
- Schlisinger, Mrs. Jane L., 1417 Filbert St., Oakland. 1915.
- Schneider, J. J., Box 363, Anaheim. 1899.
- Schumacher, Irwin C., 217 A, East Hall, University of California, Berkeley. 1915.
- Sciater, William Lutley, 10 Sloane Court, London, S. W., England. 1909.
- Scott, Ellen G., 315 S. Glendale Ave., Tropic. 1915.
- Shannon, Wm. Purdy, Room 803, 1170 Broadway, New York, N. Y. 1914.
- Sharp, Clarence S., Escondido. 1902.
- Sharples, Robert P., West Chester, Pa. 1911.
- Shaw, W. T., 600 Linden Ave., Pullman, Washington. 1911.
- Sheafer, Dr. John G., 801 Ferguson Bldg., Los Angeles. 1914.
- Shelton, Alfred, University of Oregon, Eugene, Oregon. 1909.
- Shepardson, D. I., 209 E. 37th St., Los Angeles. 1909.
- Sherman, Althea R., R. D. 2, McGregor, Iowa. 1911.
- Shiras, George, 3rd, Stoneleigh Court, Washington, D. C. 1914.
- Shufeldt, Dr. R. W., 3356 18th St., N. W., Washington, D. C. 1911.
- Silliman, O. P., Castroville. 1913.
- Simmons, D. I., R. D. 1, Box 83 B, Los Angeles. 1914.
- Simmons, George F., 622 First National Bldg., Houston, Texas. 1913.
- Skinner, E. H., 1350 S. Hope St., Los Angeles. 1900.
- Skinner, M. P., Yellowstone Park, Wyoming. 1915.
- Sleeth, Asa, 1025 Michigan Ave., Portland, Oregon. 1913.
- Sloanaker, Jos. L., Box 402, Palisades, Colo. 1910.
- Smith, Allyn G., 1711 Euclid Ave., Berkeley. 1909.
- Smith, Austin Paul, 742 Pennsylvania Ave., San Antonio, Texas. 1907.
- Smith, Clarence E., Woody, Kern Co. 1915.
- Smith, Prof. Frank, University of Illinois, Urbana, Ill. 1911.
- Smith, Franklin J., Box 98, Eureka. 1913.
- Smith, Horace G., 2918 Lafayette St., Denver, Colo. 1914.
- Smith, Wilfred, 1125 Fifth St., Santa Monica. 1911.
- Snyder, Gaylord K., 1321 Berkshire Ave., Los Angeles. 1910.
- Snyder, Prof. J. O., Box 775, Stanford University. 1900.
- Spaulding, E. S., 1408 Chapala St., Santa Barbara. 1910.
- Spielmann, Oscar P., 1440 Warner Ave., Chicago, Ill. 1909.
- Sprunger, H. C., Wickenburg, Arizona. 1915.
- Squires, Rev. W. A., 3852 23rd St., San Francisco. 1912.
- Stansell, Sidney S. S., Manly, Alberta, Canada. 1915.
- Stark, Dr. W., Auburn, Placer Co. 1915.
- Steinbeck, Wm., 1029 N. Hunter St., Stockton. 1897.
- Stephens, T. C., Morningside College, Sioux City, Iowa. 1914.
- Stevens, Dr. J. F., Box 546, Lincoln, Nebraska. 1911.
- Stivers, Dr. C. G., 502 Auditorium Bldg., Los Angeles. 1914.
- Stock, Chester, 492 Seventh St., San Francisco. 1912.
- Stoddard, H. L., Field Museum of Natural History, Chicago, Ill. 1914.
- Stone, D. D., R. D. 3, Oswego, N. Y. 1909.
- Stone, George E., 1725 Le Roy Ave., Berkeley. 1912.
- Storer, Mary S., 467 San Pablo Ave., Fresno. 1914.
- Storer, Tracy I., Museum of Vertebrate Zoology, University of California, Berkeley. 1910.
- Stover, Allan J., Corvallis, Oregon. 1914.
- Strong, Wm. A., 41 Grand Ave., San Jose. 1912.
- Stuart, George H., 3rd, N. W. corner Broad and Chestnut Streets, Philadelphia, Pa. 1913.
- Sugden, J. W., 55 South 8th West St., Salt Lake City, Utah. 1915.
- Suksdorf, P. J., Bingen, Wash. 1910.
- Sutherland, G. F., East Hall, University of California, Berkeley. 1915.
- Swales, Bradshaw H., Box 566, Santa Barbara. 1906.
- Swarth, Harry S., Museum of History, Science and Art, Exposition Park, Los Angeles. 1897.
- Sweeny, Joseph A., care of Forest Service, Laramie, Wyoming. 1912.
- Swezy, Olive, 2531 Ridge Road, Berkeley. 1914.
- Swift, J. N., Stockport, Ohio. 1915.
- Sykes, George F., 322 Agricultural Hall, Corvallis, Oregon. 1913.
- Tarbell, Olga S., 1 Cabrillo Place, Pasadena. 1906.
- Taverner, P. A., Zoological Division, Geological Survey, Ottawa, Canada. 1909.
- Taylor, E. F., Grass Valley, Nevada Co. 1910.
- Taylor, Loren E., Box 482, Reno, Nevada. 1897.

- Taylor, Walter P., Museum of Vertebrate Zoology, University of California, Berkeley. 1905.
- Telford, Harry, Klamath Falls, Oregon. 1912.
- Terrill, L. McL., 53 Stanley Ave., St. Lambert, Quebec, Canada. 1911.
- Test, Frederick C., 4620 Greenwood Ave., Chicago, Ill. 1914.
- Test, Louis A., Ames, Iowa. 1908.
- Tevis, L. K., Bakersfield. 1912.
- *Thayer, John E., Box 98, Lancaster, Mass. 1906.
- Thornber, Mrs. Harriet B., University of Arizona, Tucson, Arizona. 1914.
- Todd, W. E. Clyde, Carnegie Museum, Pittsburgh, Pa. 1909.
- Tope, L. A., Clearfield, Iowa. 1915.
- Treganza, A. O., 62 Hooper Bldg., Salt Lake City, Utah. 1907.
- Treganza, Mrs. A. O., 614 E. 6th St., Salt Lake City, Utah. 1915.
- Tremper, Lauren, 136 Dewey St., Philadelphia, Pa. 1911.
- Trenor, Thomas, 1501 Scott St., San Francisco. 1913.
- Trippe, Thomas M., Howardsville, Colo. 1911.
- Trowbridge, Chas. O., Box 42, Station A, Framingham Center, Mass. 1915.
- Trumbull, J. H., Plainville, Conn. 1911.
- Tyler, John G., 1114 Belmont Ave., Fresno. 1905.
- Tyler, Dr. Winsor M., 522 Massachusetts Ave., Lexington, Mass. 1914.
- Unglish, W. E., Box 233, Gilroy. 1910.
- Van Fleet, Clark C., Box 468, Santa Rosa. 1906.
- Van Rossem, Adriaan, R. D. 1, Box 74 A, Pasadena. 1909.
- Visher, Prof. Stephen S., Walker Museum, University of Chicago, Chicago, Ill. 1911.
- Wakely, Mrs. Katherine S., 810 S. Burlington Ave., Los Angeles. 1915.
- Walker, Alex., Hemlock, Tillamook Co., Oregon. 1911.
- Walker, Ernest P., Wrangell, Alaska. 1910.
- Walker, Dr. R. L., 355 Main Ave., Carnegie, Pa. 1914.
- Wall, Edward, Box 554, San Bernardino. 1913.
- Ward, F. H., 18 Grove Place, Rochester, N. Y. 1915.
- Warren, E. R., 20 W. Caramillo St., Colorado Springs, Colo. 1909.
- Wear, Winifred N., 253 Coast Ave., Fresno. 1909.
- Weber, H. B., Blackfoot, Idaho. 1910.
- Weber, J. A., Box 327, Palisades Park, N. J. 1915.
- Weed, Benj., Box 24, Berkeley. 1911.
- Welch, L. W., R. D. 2, Box 227 F, Long Beach. 1911.
- Wells, Gurnie, R. D. 1, Box 29, Oakley. 1911.
- Westerfeld, Dr. Otto, 240 Stockton St., San Francisco. 1915.
- Wetmore, Alex., Biological Survey, U. S. Dept. of Agriculture, Washington, D. C. 1909.
- Wheeler, Mrs. J. W., Tucson, Arizona. 1912.
- Wheeler, Roswell S., 296 Park View Terrace, Oakland. 1894.
- Wheelock, Mrs. H. B., 1040 Hinman Ave., Evanston, Ill. 1909.
- Whitcher, Chas. L., Los Olivos. 1911.
- White, Halstead G., Claremont. 1914.
- Widmann, Otto, 5105 Von Versen Ave., St. Louis, Mo. 1904.
- Wilder, H. E., Carlotta, Humboldt Co. 1909.
- Willard, B. G., 1619 Massachusetts Ave., Cambridge, Mass. 1910.
- Willard, F. C., Tombstone, Arizona. 1905.
- Willett, George, 2123 Court St., Los Angeles. 1905.
- Williams, Dr. Edward H., 609 Exchange Bldg., Los Angeles. 1914.
- Williams, Robert W., Office of Solicitor, Dept. of Agriculture, Washington, D. C. 1914.
- Wilson, Ada, 976 Atchison St., Pasadena. 1914.
- Wilson, J. Frank, 337 Highland Place, Monrovia. 1915.
- Wood, George, 7403 Hawthorne Ave., Hollywood. 1912.
- Wood, J. Claire, 179 17th St., Detroit, Michigan. 1909.
- Wood, Jesse J., 309 W. Micheltoreno St., Santa Barbara. 1912.
- Woodruff, Frank M., Academy of Sciences, Lincoln Park, Chicago, Ill. 1906.
- Worcester, Mrs. Alfred, Bacon St., Waltham, Mass. 1914.
- Wrathall, F. A., 315 S. W. Temple St., Salt Lake City, Utah. 1915.
- Wright, Frank S., 14 Cayuga St., Auburn, N. Y. 1910.
- Wright, Horace W., 107 Pinckney St., Boston, Mass. 1914.
- Wright, Howard W., Box 1, Stanford University. 1907.
- Wueste, Rudolph, Barrett Dam, Dulzura. 1901.
- Wyman, L. E., 4911 Budlong Ave., Los Angeles. 1908.
- Wythe, Margaret W., 4247 Terrace St., Oakland. 1912.
- Young, John P., 1510 Fifth Ave., Youngstown, Ohio. 1914.
- Zahn, Otto J., 2115 Estrella Ave., Los Angeles. 1896.



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